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November 13, 1961

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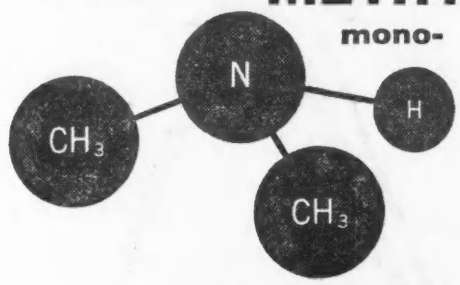

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Oil, Paint and Drug Reporter

Vol. 180 No. 20 30 Church St., New York 7, N.Y. November 13, 1961

War Fibers: Soviets Lead?

Three unique synthetic fibers — "Enant," "Ftorlon" and "Vinitron" —may put the Soviet Union ahead of the United States in the search for fibers furnishing protection against the hazards of chemical, biological and radiological warfare.

This is the conclusion drawn by the Army Quartermaster General's Research & Engineering Center in an evaluation of progress made by the synthetic fibers industry of Soviet bloc nations.

The Natick, Mass., center believes that Russian scientists may be developing new fibers having higher melting points, superior stress-strain properties, and greater inherent chemical resistance than any fibers known here.

The fibers which intrigue the QM General's researchers are "Enant," or nylon-7; "Ftorlon," a fluorine-containing copolymer, and "Vinitron," a combination of nitrocellulose with chlorinated polyvinyl chloride.

"Enant" has been lauded by the Russians as good in stress-strain properties at high temperatures. Ultraviolet resistance is also reported good. Researchers here believe the development of the material has been given high priority.

"Ftorlon" apparently resembles E. I. duPont de Nemours & Co.'s "Teflon" fluorinated hydrocarbon resin. Army engineers, in evaluating the former, found it not nearly as good as "Teflon" in heat stability, but better in stress-strain characteristics.

"Vinitron" has no exact counterpart in western technology. It is a mixture of the Soviet synthetic fiber "Khlorin" and nitrocellulose. The presence of nitrocellulose raises

—Continued on page 59

Antibiotics Producers Cleared Of All Charges Brought by FTC In Hearing Examiner's Decision

There is no monopoly in the antibiotics industry . . . there is no conspiracy to fix prices and eliminate competition in this market . . . there has been no misrepresentation of the facts in obtaining patents on the wonder drug tetracycline . . . there have been no illegal licensing arrangements among the five major producers of the drug in connection with the tetracycline patent. In short, antibiotics makers are not guilty of any wrongdoing.

So says Federal Trade Commission trial examiner Robert L. Piper in his long-awaited decision on trust law charges brought in 1958 by the agency against these five antibiotics producers:

The Antibiotics Makers Involved

American Cyanamid Company of New York; Bristol-Myers Company of New York and its subsidiary, Bristol Laboratories, Inc., Syracuse, N. Y.; Chas. Pfizer & Co. of New York; Olin Mathieson Chemical Corporation through its E. R. Squibb & Sons Division, New York, and the Upjohn Company of Kalamazoo, Mich.

In his ruling handed down last week, Mr. Piper recommends the dismissal of all charges against the five firms. While not a final action of the commission, Mr. Piper's decision brought immediate cheer to the industry.

Particularly gratified were Pfizer, Cyanamid and Bristol, indicted in a separate Justice Department action by a New York federal grand jury three months ago on criminal charges of maintaining unreasonably high and non-competitive prices and of monopolizing the production and distribution of broad-spectrum antibiotics (OPD, 8/21/61).

Said John E. McKeen, Pfizer president: "The decision confirms the confidence we have always had that an objective examination of the facts would result in the complete exoneration of our company."

Added a Pfizer spokesman significantly: The New York grand jury indictment "ap-

—Continued on page 74

TRUBEK PRESIDENT: Henry W. Grote, elected president and a director of the Trubek Laboratories, Inc., East Rutherford, N.J., a wholly-owned subsidiary of Universal Oil Products Company.

Hazardous Label Law Said to Need Improving and Another Good Look

Chemical producers are dissatisfied with the "final" regulations of Food & Drug Administration for enforcement of the hazardous substance labeling law. The industry says there is still room for much improvement, to bring the rules more in line with the intent of congress when it passed the law last year, and it is asking officials to take another look before allowing the rules to become effective next February 1.

GAF OPERATIONS BOSS: Harold G. Shelton, elected to the newly-created position of executive vice-president-operations by General Aniline & Film Corporation, New York, in which post he will direct all operating groups and divisions of the concern.

The request for review was made on behalf of the chemical industry last week by John E. Hull, president of Manufacturing Chemists' Association, in a letter to FDA Commissioner George P. Larrick.

At the same time, Mr. Hull filed a formal request with the agency for an exemption of proprietary solvents and completely denatured alcohol from the labeling law on the grounds that these are adequately regulated as to their labeling by the Alcohol & Tobacco Tax Division of Internal Revenue Service.

No Immediate Word Out of FDA

No immediate announcement was forthcoming from FDA on what it plans to do about the two requests.

Industry's objections to the labeling rules are somewhat the same as those expressed against the original form of the rules last June, but are made more pointed with new arguments emphasizing the manner in which they deviate from the intent of congress.

Mr. Hull says that in one respect, FDA appears bent on converting it into a licensing law.

He sees this in FDA's interpretation of the law's definition of "toxic" substances, saying that the regulations still find as a fact that substances are "hazardous substances" if they fall within the oral toxicity range of 500 milligrams to five grams per kilogram of body weight of the white rats being tested.

FDA's only concession to previous industry objections to this interpretation, Mr. Hull notes, is to agree to consider exemptions of products within this range if a certain showing is made.

Recalling statements of scientists at hearings on the original regulations that there would be many substances which

—Continued on page 57

Pfizer Signs Papers For Leeming, Pacquin

Chas. Pfizer & Co., New York, has just signed agreements to acquire the outstanding stock of Thomas Leeming & Co. and the assets of Pacquin, Inc., corporately-linked firms which handle a number of drug and toiletry products.

Basis for the acquisitions is an exchange of an undisclosed number of shares of Pfizer stock.

The acquired companies market "Ben-Gay" ointments, "Pacquin" hand creams, "Silk 'n Satin" lotion, "ManiMagic" cream cuticle remover, and other items.

—Continued on page 63

FDA Asks for Comments On Drug Label 'Fine Print'

Food & Drug Administration is tired of hearing complaints about the "fine print" in prescription drug labeling, so now the agency plans to do something about it.

Last week FDA invited interested persons to comment on a proposed set of new rules that would require the printing of cautions and warnings, as well as information on contra-indications and side effects from prescription drugs in eight-point type. The same goes for the label-

—Continued on page 56

Coconut Oil Sale Brings 10.84 to 11.77 Cents Bids

General Services Administration last week sold 11,108,380 pounds of stockpiled coconut oil at prices ranging from 10.84 cents to 11.77 cents a pound. Successful bidders and their prices were:

Item 1—4,097,000 pounds to Lever Brothers Company, New York, at 11.58 cents a pound.

Items 2 and 3—No bids received.

Item 4—3,064,040 pounds to Pacific Vegetable Oil Corporation, San Francisco, at 11.77 cents a pound.

Item 5—3,030,540 pounds to E. F. Drew & Co., New York, at 10.84 cents a pound. below).

Item 6—916,400 pounds to Vegetable Oil Products Company, Wilmington, Calif., at 11.10 cents a pound.

Acrylonitrile Collision Shocks World Market

The Houston Ship Channel collision last week between the Norwegian tanker Berean and the Chinese Nationalist freighter Union Reliance reverberated not only up and down the canal, but around the world as well.

Major cargo of the Berean is acrylonitrile—$500,000 worth of it, or about 3.4 million pounds at present going prices—bound for the United Kingdom (see story below).

Industry observers here believe the cargo is bound for the Northern Ireland "Acrilan" acrylic fiber plant of Chemstrand, Ltd. This means that someone in the UK has lost a customer.

That someone, Imperial Chemical Industries, Ltd., is reported ready to shut down its acrylonitrile operation at Billingham because of loss of business to US producers who slashed acrylo prices last July from 23 cents a pound to 14½ cents a pound.

ICI is the latest to feel the sting of the price-cut. Among the first overseas producers to smart were the Japanese who,

—Continued on page 43

Acrylo Tanker Battered, Will Sail Despite Collision

A Norwegian tanker, the Berean, laden with acrylonitrile, is slated to continue its journey to the United Kingdom and Europe despite a collision with the Chinese freighter Union Reliance in the Houston Ship Channel November 7.

The Berean contains a cargo of $500,000 in acrylonitrile, or about 3.4 million pounds at current going prices. At the time of the collision it was inbound to Port Houston to top off with lubricating oils and chemicals.

The Chinese freighter, with a cargo of lumber and vegetable oils, was outbound for New Orleans. Three men were reported dead and seven missing in the collision.

Despite a gaping hole in the Berean's side near a front hold, decision was made to continue to Houston, top off, and then return overseas, the ship's agents report.

Chemical Marketing Cues . . .

7 DYESTUFFS: OPD's exclusive statistical report on the state of business.

41 NITRIC ACID: Japanese build for 40 percent rise in demand by '63.

50 ETHANOLAMINES: Will permanent creases be a tonic to sales growth?

69 CHEMICAL MILLING: A 7-year-old process looms larger in metals field.

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Fertilizer's Choice: Cut Price Or Lose Chunk of O'Seas Mart

US fertilizer producers are on a spot. They must either reduce export prices for nitrogenous materials to a level more nearly competitive with other free world suppliers or lose a big chunk of the overseas market financed with mutual aid funds. The unpleasant choice presents itself in a change in government procurement policies under the mutual aid program which industry and congressional protests have as yet been unable to dislodge. The unannounced change came to light in connection with last month's awarding of contracts to fill Korea's fertilizer needs.

What had been advertised as a $17 million market open only to the American fertilizer industry and a few unimportant fertilizer producing countries has suddenly been reduced to $11 million—with the remaining $6 million worth of fertilizer to be re-offered to all free world suppliers under bids to be opened Wednesday (November 15).

Businessmen, Congressmen Protest

Nitrogen producers and shipowners have been contacting officials of the Agency of International Development—formerly International Cooperation Administration—and telegrams and letters of protest have been fired into the agency from congressional quarters contending that the change violates the "Buy American" policy written into the mutual aid program by congress only a few months ago.

Thus far little satisfaction has been gained from these efforts, however. Officials have given no reason for expanding the field of competition to cover all world suppliers of nitrogen, nor have they cited the legal basis for changing procurement policy in the light of the recent congressional action.

References have been made in discussion to an unpublished directive of former President Eisenhower during the time of the heavy outflow of gold last year, per-

—*Continued on page 52*

Uranium Hexafluoride Is Put on the Market

Allied Chemical Corporation, New York, is ready to make normal uranium hexafluoride, the basic nuclear raw material, available to non-governmental users.

The company, through its General Chemicals Division, had been supplying the Atomic Energy Commission with about 6,000 tons of UF_6 yearly from its Metropolis, Ill., plant. The material is normal UF_6, containing 0.007115 weight fraction U-235.

Allied says that the new class of buyers must represent "qualified industrial and research consumers."

Aluminum Alkyls: Capacity Is Increasing

Texas Alkyls, Inc., one of the two "big boys" in aluminum alkyls, is completing a huge expansion program at LaPorte, Tex. The company's capacity is now 8 to 10 million pounds, depending on the product mix. The current expansion will more than quadruple this.

And, while waiting for completion of its new capacity, Texas Alkyls has just announced price decreases on most of the aluminum alkyls. The new listings range from 90 cents to $1.50 per pound. This compares to an old range of $2 to $5 per pound.

Ethyl Corporation, New York, which has a large installation at Orangeburg, S. C., and is the other big factor in aluminum alkyls, had nothing to say about the move

—*Continued on page 39*

Alcoa Reduces Its Prices On All Grades of Gallium

Aluminum Company of America today announced it had reduced prices for all three grades of gallium.

The greatest decrease—25 percent—applies to large quantities of electronic grade gallium (GA6), most heavily used of the three grades.

New facilities for producing gallium now are in operation at the company's Bauxite, Ark., works and resulting improvements in processing and manufacturing costs, plus increased volume, have made price reductions possible.

German Petrochemicals: Erdoelchemie Grows Lustily

Erdoelchemie GmbH, Dormagen/Niederrhein, West Germany, will spend DM 340 million to expand existing plants and build new ones.

The firm, a subsidiary of BP Benzin und Petroleum AG, Hamburg and Farbenfabriken Bayer AG, Leverkusen, will look like this when the program is complete:

Ethylene	115,000 tons yr.
Ethylene oxide	36,000 tons yr.
Ethylene glycols	32,000 tons yr.
Ethanol	54,000 tons yr.
Propylene	110,000 tons yr.
Propylene oxide	28,000 tons yr.
Propylene glycols	7,000 tons yr.
Acrylonitrile	25,000 tons yr.
Butyraldehyde	12,000 tons yr.
Butadiene	60,000 tons yr.
Isoprene	12,000 tons yr.
Isobutylene monomer	12,000 tons yr.
Di- and tri-isobutylene	45,000 tons yr.
n-Butene 1, 2	50,000 tons yr.

Above in metric tons. The following are already built: Ethylene; 45,000 tons yr.; ethylene oxide, 36,000 tons; ethylene glycols, 32,000; ethanol, 18,000; propylene, 10,000; propylene oxide, 10,000; butadiene, 30,000.

The Week's Price Changes

Carnauba Wax, Argentine Casein, Peanut Meal Advanced. Gluconic Acid, Dextrin, b-, g-Picoline, Rapeseed Oil Reduced.

Prices Advanced

Carnauba wax, yellows, 4c. to 5c. per lb. (p. 53).
Casein, Argentine, ½c. per lb. (p. 61).
Cocoa butter, 2c. per lb. (p. 53).
Cottonseed meal, $3 to $4 per ton (p. 53).
Cottonseed oil, crude, ½c. per lb. (p. 53).
Refd., ½c. per lb.
Peanut meal, $2 per ton (p. 53).
Soybean meal, $3 per ton (p. 53).
Soybean oil, crude, ¼c. per lb. (p. 53).
Refd., ¼c. per lb. (p. 53).
Tin, Straits, 1c. per lb. (p. 41).

Prices Reduced

Castor, No. 1, Braz., ½c. per lb. (p. 53).
Corn oil, crude, ½c. per lb. (p. 53).
Refd., ½c. per lb. (p. 53).
Corn syrup, 15c. per cwt (p. 50).
Dextrin, 20c. per cwt. (p. 50).
Gluconic Acid, 1½c. per lb. (p. 50).
Linseed meal, old proc., $1 per ton (p. 53).
Molasses, N.O., ¼c. per gal. (p. 50).
Peanut oil, crude, ½c. per lb. (p. 53).
Refd., ½c. per lb.
b-Picoline, 35c. per lb. (p. 54).
g-Picoline, 85c. per lb. (p. 54).
Rapeseed oil, ½c. per lb. (p. 53).
Sodium gluconate, tech., bgs., c.l., 4½c. per lb. (p. 58).
Tallow, edible, ½c. per lb. (p. 53).
Tung oil, ½c. per lb. (p. 53).

OPD Price Index

THE OIL, PAINT AND DRUG REPORTER'S relative record of prices of chemicals and related materials is currently as follows:

(100—1949 average)

Nov. 11, 1961	Nov. 3, 1961	Nov. 12, 1960
113.95	113.88	108.71

Chemical Trade Record Seen

The chemical industry is headed for another new record in its foreign trade department this year. Preliminary estimates of the Bureau of Census last week placed the nine-month total exports of the industry at $1,289.1 million and imports at $298.9 million. Both figures are appreciably higher than last year's comparative totals of $1,175.2 million for exports and $270.9 million for imports. Only an unexpected slump in the last quarter of this year could drop the 1961 totals below last year's record high of $1,682.2 million for exports and $356 millions for imports.

The nine-month export total for this year was a record high level, in spite of the fact that exports declined during each of the three months of the third quarter.

September Exports Off

September exports were estimated by the bureau at $139.3 million, which compares with 142.1 million for August and $149.7 million for July.

Imports of chemicals on the other hand rose in each month of the third quarter, the figures being $31.4 million in September, $29.8 million in August, and $29.2 million in July.

During September of 1960, exports were at a level of $142.1 million and imports, $28.2 million.

With September exports of all merchandise valued at $1,613.2 million, the bureau says that the nine-month total ex-

—*Continued on page 65*

MARKET DEVELOPMENT CHIEF: Neil M. Barber, appointed manager of market development in its Eastern Chemical Division, Niagara Falls, N.Y., by Hooker Chemical Corporation.

Gulf Has a Big Interest In New Danish Company

Nordisk Gulf-Gas A/S. a joint Danish-American Company, has been organized at a meeting of shareholders held at Esbjerg, Denmark.

Nordisk Gulf-Gas will acquire the propane, butane, and liquid petroleum gas business at Nordisk Flaskegas A/S which now operates in Denmark. Gulf Oil Corporation, through Warren Petroleum International Corporation, a wholly-owned subsidiary, holds a substantial interest in the new company.

The main source of supply eventually will be the Gulf refinery now under construction at Stigsnaes, Denmark.

Sodium Silicates Expansion Made by PQ's Canadian Arm

National Silicates, Ltd., Toronto, associate company of Philadelphia Quartz Company, Philadelphia, has expanded its plant in Toronto for the manufacture of anhydrous sodium metasilicate.

These additional facilities will supplement the manufacture of pentahydrate sodium metasilicate and sodium sesquisilicate, which has been produced at Toronto for many years.

Index to News and Market Reports

Association News

Chemicals Seen Aiding Cotton Sales.. 5
CMCSA Elects Robins..... 56
FSPT Installs Foy..... 7
Hazardous Labeling Rule Scored..... 3
SOCMA Meets Nov. 14..... 60
Tallow: Research Breakthrough Needed 5

Government News

Antibiotics Makers Cleared of FTC Charges 3
Benzenoid Products Ploy Viewed Dimly. 7
Coconut Oil Sold by GSA..... 3
Drug Counterfeiting Seen Limited..... 7
FDA Calls for Comments on Labeling.... 3
FDA May Approve Cystein for Bread.... 43
Menthol Cleared for New Uses..... 49

Industry News

Acrylo Tanker Will Sail Despite Crash.. 3
Acrylic Finish Seen Paint Sales Aid..... 6
Alcoa Reduces Gallium Prices..... 4
Aluminum Alkyls Expansion Set..... 4
Calcium-Sodium Borate Slows Fire..... 5
Chemical Inventories: August..... 9
Citric Acid Has New Use..... 56
Dixon Ships HF from New Plant..... 5
Dyestuffs: Third Quarter Sales..... 7
Eastman Offers New Propionate..... 62
Ethyl Alpha Propionate Price Cut..... 51
Fatty Acid Chemicals: 1960 Production.. 5
Fertilizer Men Face Loss of Market..... 4
Fritzsche Offering Citrus Oils..... 65
Furfuryl Alcohol Expansion Set..... 5
Hilton-Davis Offers New Paint Colors... 62
IMC Making Diammonium Phosphate.. 5
Ind. Standard Cites Ammonia Goal..... 7
Marbon Drops Plastics Prices..... 61
Methylacetylene Offered by Dow..... 56
Pfizer Acquires Leeming, Pacquin..... 3
Pfizer Tranquilizer Cited in Study..... 59
Rare Earths Booklet Issued..... 44
Schoenmann Sets Up Cosmetic Unit..... 65
Standard Naphthalene Buys Toledo Site. 7
Texaco Chief Is Optimistic..... 67
Upjohn Discovers Antibiotic..... 59
Uranium Hexafluoride Is Marketed..... 4
Vitamix Introduces Cold Remedy..... 59
World Sulfuric Production Reported.... 42

International News

Acetylene-Ethylene Unit Starts in Japan 5
Acrylonitrile Crash Shocks Market..... 3
Calcium Carbide Unit to Rise in Norway 42
Carbon Tet Plant Slated in Australia.... 42
Chemical Expansion Spending Revamped 7
Chemical Tariffs: ECM Barriers Seen.. 5
Chemical Trade Record Seen..... 4
Danish Ammonia Plant Set..... 49
E. Germany's Schwedt Unit Due in '63.. 7
Fertilizer Venture in Ceylon Proposed.. 49
Fisons Cutting Share of Fertilizer Deal.. 3
Germany's Erdoelchemie Growing..... 4
Gulf Has Interest in Danish Firm..... 4
ICI Growing in Nylon..... 51
Laporte Has Expansion Plans..... 5
Montecatini Building in India..... 51
Parke, Davis Building O'Seas 59
Sodium Silicate Expansion Told..... 4
Spanish Petrochem Unit Being Negotiated 3
Swiss Chemical Exports Slow..... 52
Vanillin Output Slated in Norway..... 65
War Fibers Stressed by USSR..... 3

Personnel News

GAF Elects Shelton..... 3
Gulf Names Capell..... 5
Hooker Appoints Barber..... 4
Oronite Chooses Stayner..... 7
Texas Butadiene Appoints Buselli..... 5
Trubek Elects Grote..... 3

Market Reports

Acids 41
Agricultural Chemicals..... 49
Alphatic Organics 50
Aromatic Chemicals 64
Botannical Drugs, Gums 59
Coal Chemicals 54
Coating Materials 61
Drugs 58
Essential Oils 64
Fats & Greases 74
Fertilizer Materials 49
Fine Chemicals 58
Heavy Chemicals 41
Industrial Organic Chemicals..... 50
Metals, Nonferrous 42
Naval Stores 61
Oil Cake and Meal..... 74
Oils 53
Paint Materials 61
Pesticides 49
Petrochemicals 50
Petroleum Derivatives 67
Protective Coating Materials..... 61
Spices 64
Trade Name Chemicals 69
Waxes 74

General Features

Advertisers' Index 75
Association Meeting Dates 9
Bids Wanted..... 39
Classified Advertisements 74
Coal Chemical Output 54
Crude Oil Stocks 67
Current Market Quotations 11
Editorials 9
Imports 68
Obituaries 63
OPD Price Index 4
OPD Reports From Europe..... 7
Washington Talks It Over..... 9

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COM'L DEVELOPMENT BOSS: Robert G. Capell, named director of commercial development in its petrochemicals department by Gulf Oil Corporation, Pittsburgh, Pa.

Acrylic Finish Seen Paint Sales Bonanza

Pittsburgh Plate Glass Company has developed a thermosetting acrylic resin which could have impact on the paint industry during the next decade similar to that of nitrocellulose lacquer in the twenties and alkyd resins during the thirties.

The resin, an ingredient of Pittsburgh Plate's "Duracron" industrial enamels, is thermosetting, rather than thermoplastic, as are other acrylic resin-based paints today. Advantage of being thermosetting is that the resin can accept intense radiation without sacrificing proprties.

Realizing this is the case, PPG researchers have developed a fast-cure system in which propane is oxidized without flame by oxygen on a catalytic screen which then radiates "far" infra-red rays at temperatures of 1,000-2,000 degrees Fahrenheit.

Advantages of the system: It uses the more efficient "far" range of the infrared spectrum, and, most important, it can effect cure in twenty-four seconds or less. Conventional equipment takes half an hour.

These and other developments highlighted the opening of PPG's paint division's consumer products research laboratory at Springdale, Pa., last week.

The new unit virtually completes the division's efforts to centralize and expand at the location the research activities formerly located at Milwaukee, Wis.

Other developments demonstrated at the opening:

- Polyester-fiber-glass tank bottom installations which prevent corrosion of tank bottoms by salt water.
- Polyester-fiber-glass road surfacing for bridges and the like to prevent salt deterioration of concrete, which can be clear or in colors.
- Rigid polyurethane foam developments including foams for insulation,

—Continued on page 55

Acetylene-Ethylene Plant Starts Operating in Japan

The acetylene-ethylene producing plant constructed by Sumitomo Chemical Company, Ltd., Niihama, Japan, has been successfully started up and has just entered into industrial operation.

This plant produces twenty-five tons per day of acetylene and fifty tons of ethylene. It operates according to the process of Societe Belge de L'Azote et des Produits Chimiques du Marly (SBA), Liege, Belgium, which granted a license to Sumitomo.

Tallow Breakthrough Needed In Aliphatic Chemical Research Or Future Is Cloudy: Pattison

Use of tallow in the manufacture of long-chain aliphatic chemicals needs a breakthrough in order to show any significant progress. This is the word given the National Renderers' Association by E. Scott Pattison, manager of the Fatty Acid Producers Council. Mr. Pattison told the association's New York annual convention last week that expansion in the use of tallow for oleochemicals is not too bright in view of competition from lower-priced raw materials having the same long-chain aliphatic molecules.

Another adverse factor: Hydrolysis of glycerides to fatty acids and glycerine is not likely to yield any rising margin based on glycerine recovery.

Reason is that over-capacity of synthetic glycerine is also here, and byproduct glycerine value is not likely to be increased.

*Fatty Acid Chemicals**

	1960
SURFACTANTS:	
Fatty acid esters (laurates, oleates, stearates, etc.), nonsulfonated....	43.9[1]
Fatty acid salts (potassium and sodium soaps) laurates, oleates, stearates, etc.....	11.3[1]
Fatty acid amines (and other nitrogen-containing surfactants from fats)	76.3
Sulfated and sulfonated oleic acid and oleic esters	4.5
Lauryl (dodecyl) sulfate salts.....	16.0
Total	152.0
PLASTICIZERS:	
Oleic and stearic esters	18.5
Azelaic acid esters	7.5
Palmitic acid esters.....	....
Sebacic acid esters	13.8
Total	39.6
MISCELLANEOUS:	
Misc. fatty acid esters	3.2
Metallic stearates (salts).....	25.2
Other fatty acid salts.....	0.9
Total	29.3

* Millions of pounds. Source: Fatty Acid Producers Council.
[1] Includes 3.8 million pounds potassium tallate.
[2] Excludes polyoxyethyl tall oil ester, 26.9 million pounds.

The fatty acid industry itself, a large consumer of tallow, is, like the chemical industry as a whole, also in the state of over-capacity.

Mr. Pattison believes that if a major breakthrough is to come, opening up a new possibilities for long-chain aliphatic chemicals, it must originate with fundamental research of a much greater magnitude than individual companies are in a position to carry on.

Some broad-based program of research, perhaps coordinated with governmental

—Continued on page 44

Diammonium Phosphate Made at IMC's New Unit

International Minerals & Chemical Corporation has added a high-analysis diammonium phosphate to its line of fertilizer materials at Bonnie, Fla.

Early this month IMC began producing the nitrogenous product at its new multimillion-dollar plant, which is adjacent to the existing agricultural chemicals unit. The new facility will have a production capacity of 120,000 tons per year.

The new product contains 18 percent nitrogen and 46 percent phosphoric acid. Diammonium phosphate produced at the plant is currently kept at a nearby storage building and shipped by rail.

IMC says the material will also be transported by river barge to other company-owned storage cites to facilitate delivery to midwestern and southern markets.

R&D VICE-PRESIDENT: Dr. A. J. Buselli, who is joining Texas Butadiene & Chemical Corporation, New York, as vice-president in charge of research and development.

Furfuryl Alcohol Set For Doubled Capacity

Quaker Oats Company, reportedly the only maker of furfuryl alcohol in the United States, is planning to build a new production unit in Omaha, Neb., which will double the company's capacity to make the material.

Just what the firm's output figures are is a secret, but the maker's chemicals division does reveal that it is aiming to have the new unit completed and ready to go by the first quarter of next year.

This will be the third furfuryl alcohol plant for Quaker Oats, the others being in Memphis, Tenn., and Southall, England.

The operation will employ a low-pressure continuous hydrogenation process developed by Quaker Oats and will use furfural manufactured at Omaha as raw material.

The unit, including hydrogen facilities, is being engineered and constructed by the company. It will free some of the hydrogenation facilities at Memphis, thereby allowing increased production of tetrahydrofurfuryl alcohol and other hydrogenation products.

Hydrofluoric Acid Shipped From Dixon's New Facility

Dixon Chemical Industries, Inc., Clifton, N.J., has made the first shipments of hydrofluoric acid from its new 11,000-ton plant at Paulsboro, N.J.

The basic design and technics employed in the plant were imported from overseas, along with assembly teams which supplied specialized assistance in installing critical items of the process.

The new plant will be integrated with what is said to be the world's largest sludge-burning sulfuric acid plant, also on the same site.

Chemical Tariffs: Euromart's Fog Likely to Thicken

American chemical producers, already running into difficulty with European Common Market nations on dumping charges, may be faced with an even more bewildering array of tariff structures if the United Kingdom (which wants to get into ECM) or its present members have their way.

Already France has slapped a dumping penalty on Spencer Chemical International for bringing in cut-priced polyethylene (OPD, 11/6/61), and latest reports are of new anti-dumping moves in Britain and West Germany.

In the UK, Imperial Chemical Industries, Ltd.—with the backing of Monsanto Chemicals, Ltd.—is asking for anti-dump legislation against PE imports from the United States. Union Carbide, Ltd., is of a like mind and plans to make a separate plea.

West Germany and Phenol

In West Germany, where a new, tough anti-dumping law goes into effect on January 1, the word is that phenol producers there will ask for protection against imports which are being laid down at 11½ cents a pound, c.i.f. German and Benelux ports.

But current moves by Common Market hopefuls would put a 20 percent cut in tariffs on the table at the General Agreement on Tariffs & Trade negotiations, thus presenting possibilities of foreign producers doing a bit of dumping on their own in this country.

Britain is reported to have proposed to ECM as part of preliminary talks on its application for membership that the proposed cut of 20 percent in the market's external tariff be consolidated across the whole tariff structure in the present GATT negotiations in Geneva, Switzerland.

But in Brussels, Belgium, the Council of Ministers of the European Economic Community is understood to be planning a phased 20 percent reduction so that it will be able to apply pressure on the US in the future on reciprocal cuts.

With all these calculations on how to get tariffs lower in the ECM and in America, there's also some sniping from within

—Continued on page 39

LaPorte, of England, Plans Two Organic Chemical Units

LaPorte Industries, Ltd., of England, is planning two organic chemical projects. One will produce cyclohexanol and cyclohexanone and the other will produce from those raw materials dicyclohexyl phthalate, a solid plasticizer used in making film.

Total capacity of cyclohexanol and cyclohexanone and products produced from them will be 9,000 tons a year according to LaPorte's Howards subsidiary.

The dicyclohexyl phthalate plant will be completed by the end of next year and with Howards' existing capacity will satisfy domestic and export requirements "for some years," the company says. The other plant will be completed in 1963.

Calcium-Sodium Borate Bombs Out Coast Fire

United States Borax & Chemical Corporation's "Firebrake" calcium-sodium borate made dramatic headlines last week as officials credited it with helping to curb the worst fire in the history of southern California. Damage is estimated at more than $20 million.

Old bombing planes dumped a slurry containing one part "Firebrake" to four parts water on an area between two brush fires which, had they joined, would have roared unchecked through the swank Pacific Palisades area, causing untold further tragedy.

More than 120 tons of slurry were used in this one location. The calcium-sodium borate's action is twofold: It coats foliage with fire-retardant material, and it lowers the fire temperature at the source.

Chemicals to Cotton: 'Let's Do the Twist, King'

King Cotton and the chemical industry are set to launch a triple-pronged attack which could give impetus to sales similar to the development of wash-wear cottons ten years ago.

Dr. C. H. Fisher, of the Southern Utilization Research & Development Division of the Department of Agriculture, told the National Cotton Council's chemical finishing conference in Washington last week of three developments which augur a breakthrough in cotton technology:

- Slack mercerization of fabric to impart specific amounts of stretch.
- Back-twisting resin-treated yarns, which causes them to take the shape of tiny helical coil springs.
- Crimping yarns first made thermoplastic by chemical treatment.

In the slack mercerization method, cotton fabric is allowed to shrink freely in a mercerized bath of sodium hydroxide solution. The amount of shrinkage and the consequent amount of stretch imparted is determined by the concentration and temperature of the caustic solution and the density and weave of the fabric.

The second method involves treatment with resin-forming chemicals similar to those used in producing wash-and-wear fabrics. Cotton yarns treated with these resins tend, when stretched, to return to the shape they had when treated.

The scientists applied this principle by first twisting the yarn, then treating it with a resin such as dimethylol ethyleneurea, and finally reversing the twist.

The back-twisted yarn tries to return to the highly-twisted state in which it was treated. In doing so, the yarn pulls itself into tiny resilient helical coils that have as much as 200 percent stretch.

In the third method, cotton is treated with a chemical such as acetic anhydride,

—Continued on page 55

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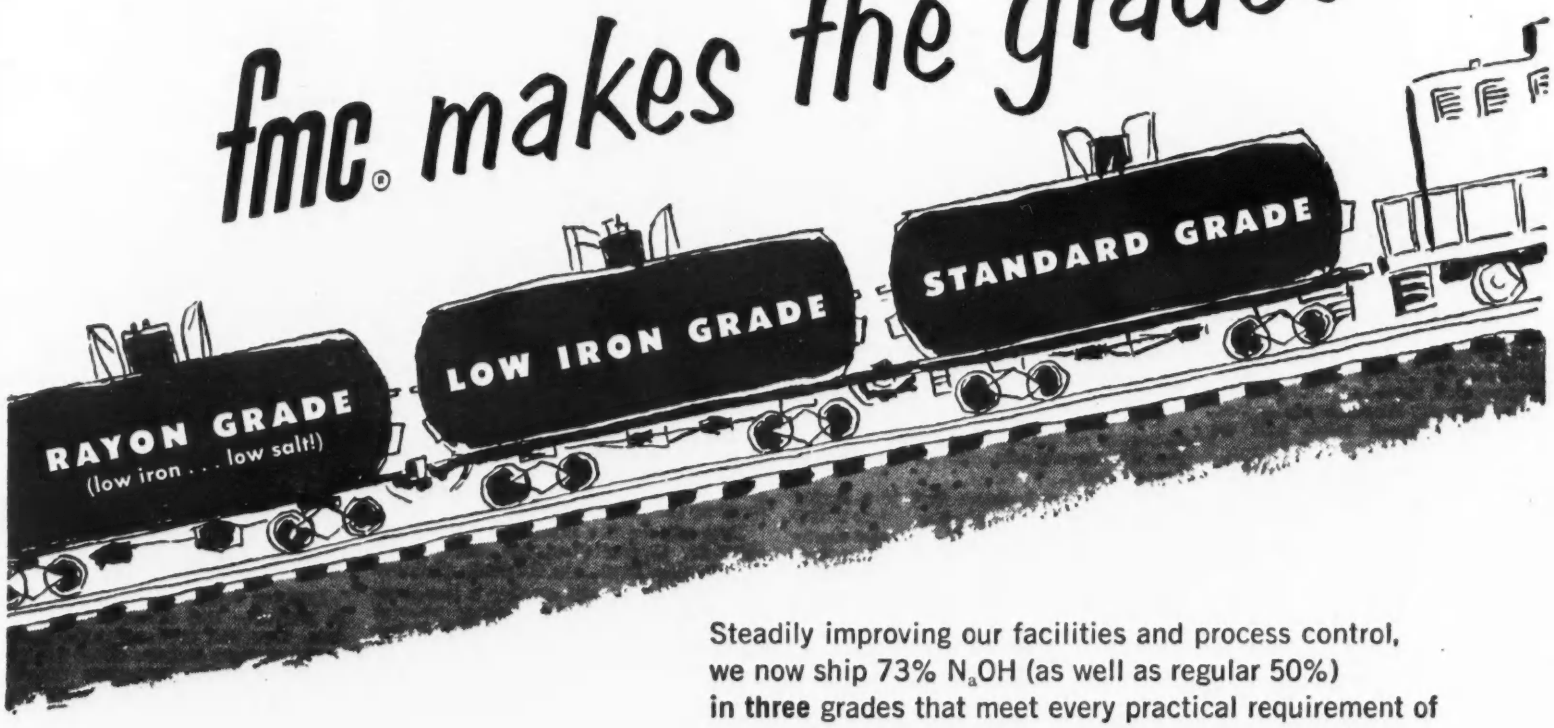

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OPD REPORTS ON DYESTUFFS
How Business Is Shaping Up

	Third Quarter Sales 1961	1960
Acid Dyes	$5,434,067	$4,916,617
Basic Dyes	3,589,568	2,974,828
Mordant Dyes . . .	1,294,155	989,564
Solvent Dyes . . .	1,611,140	1,485,297
Vat Dyes	10,374,587	9,388,798
Total	$22,303,517	$19,755,104

OPD's report of sales value is based on figures supplied by producers representing more than 80 percent of domestic output of the above dyestuff classes. The figures for acid dyes include pre-metallized dyestuffs.

Benzenoid Products Ploy Viewed Very Dimly by the Tariff Commission

Tariff Commission is taking a dim view of efforts of importers to get a change in the basis of valuation of benzenoid products written into the new tariff classification law now before congress. The commission says that the proposal has no place in the study on which the new law is to be based. The commission's rejection of the importers' proposal is contained in the first supplemental report on the broad tariff classification study completed and submitted to the congress last year after six years of work.

PAINT FEDERATION HEAD: William L. Foy, head of vehicle research for Foy-Johnston, Inc., Cincinnati, Ohio, who has been installed as the fortieth president of the Federation of Societies for Paint Technology.

Hearings on the supplement, which seeks to bring the study up to date, will be held by the commission starting November 20.

The supplement includes more than a dozen changes in the chemical and related products schedule of the new classification, mostly to correct errors in the original report or to take care of omissions. Several are of a fundamental nature, however.

What Importers Are Seeking

In connection with benzenoid products, importers urge a change relating to the American selling price basis of valuation which would have the effect of limiting the area in which imported products are considered to be in competition with a similar domestic product.

Also, they propose a new head note for the classification of these products stating that:

"For the purposes of this part, the ad valorem rate of duty based on the American selling price shall not be assessed on any imported coaltar product considered competitive until ninety-days subsequent to the inclusion of such imported coaltar product in a public list promulgated by the Secretary of the Treasury."

Aims of the tariff classificatoin study are:

- To establish schedules of tariff classifications which are logical in arrangement and terminology and adapted to the

—Continued on page 59

Fisons Cutting Back On Fertilizer Venture

Fisons, Ltd., British fertilizer producer, will cut back part of its proposed nitrogenous fertilizer project planned jointly with Esso Petroleum Company, Ltd., at British Esso's Milford Haven refinery.

Fisons doesn't disclose what part of the project is being cut, but says its investment originally planned for $33.6 million over three and a half years will now be $28 million.

Fisons and Esso created Milford Haven

—Continued on page 66

Spanish Petrochem Plant Is in the Negotiation Stage

Negotiations in Spain have started about the petrochemical side of a new refinery-petrochemical complex planned for Puertollano.

Participants in preliminary talks about the petrochemical plant include, it's understood, Royal Dutch/Shell, Imperial Chemical Industries, Ltd., of Britain, Montecatini of Italy and Phillips Petroleum Company, Bartlesville, Okla.

OPD Reports From Europe

Chemical Expansion Spending: The World Trend Is to Rephase, To Stretch Out, to Cut Back

Rephasing, stretching-out or just plain cutting back of chemical capital expansion programs—especially in plastics and some petrochemicals—is apparently an increasing phenomenon in the chemical industry around the world. Verband des Chemischen Industries (German Chemical Industry Association) reports that the slowdown in growth rates and the surge in cut-price world competition has brought some "examination of investment intentions" by chemical companies, but it adds that no "essential reduction" is in the cards for the German industry.

German expansion budgets in 1961 are now expected to run around $500 million, against $575 million for 1960 and $425 million in 1959.

The Verband notes that the 1960 total was swollen by carry-over of projects from 1959 when the German industrial equipment industry had difficulty meeting all the demands of its customers and there were long delays in equipment deliveries.

Investments Scrutinized in Many Nations

But this "examination of investment intentions" is an intensive process in many countries.

For instance, Japan, one of the fastest growing chemical and plastics producing countries, is quietly cutting back long-term targets.

Polyethylene capacity in Japan, put at 100,000 metric tons this year, was to have been raised to 270,000 tons in 1965 and 720,000 tons in 1970.

Now Japan's Ministry of International Trade & Industry is projecting polyethylene capacity at 238,000 tons in 1965 and 544,000 tons in 1970.

The same kind of story is reported for Japanese polyvinyl chloride, where targets have been cut by government planners from 590,000 metric tons in 1965 to 520,000 tons and from 900,000 tons in 1970 to 700,000 tons.

Here are some of MITI's other revised chemical targets for 1965 (forecasts for 1970 in parentheses):

Ethylene, 609,000 metric tons (1.5 million tons); propylene, 396,000 tons (906,000 tons); butadiene, 117,000 tons (166,000 tons); styrene, 118,000 tons (218,000 tons).

Polystyrene, 70,000 tons (155,000 tons); polypropylene, 75,000 tons (233,000 tons); phenolic resins, 119,000 tons (250,000 tons); urea resins, 237,000 tons (343,000 tons).

Benzene, 369,000 tons (635,000 tons); toluene, 196,000 tons (280,000 tons); xylene, 109,000 tons (172,000 tons); synthetic phenol, 95,000 tons (160,000 tons), and phthalic anhydride, 103,000 tons (143,000 tons).

In Britain, the government Board of Trade has been working with chemical companies for some time on a ten-year plan and projection of plastic capacity and consumption.

The industry is now reported to be

—Continued on page 60

COATINGS SALES MANAGER: R. D. Stayner, named sales manager of surface coatings and plastic chemicals by Oronite Division of California Chemical Company, San Francisco.

E. Germans by '63 Expect Petrochemicals at Schwedt

East Germany's refinery and petrochemical plant at Schwedt is expected to start up production in 1963.

Its production will include benzene, xylene and other hydrocarbons—with output going especially into expansion of synthetic fiber capacity.

As a result of Schwedt and other projects, East Germany will radically reduce its dependence on coal as a source of chemicals. In 1959 all the zone's benzene, xylene and ethylene came from coal.

By 1965 petrochemical sources will cut coal-based benzene to 74 percent of the total and xylene to 10 percent, with some considerable capacity of ethylene.

Ind. Standard Pushes Its Plans for Ammonia

The ammonia program of Standard Oil Company (Ind.) continues to roll on, with affiliated Tuloma Gas Products Company announcing a major manufacturing, distribution and marketing expansion goal for nitrogenous fertilizers.

The growth program includes a number of features: construction of an additional anhydrous ammonia plant to increase Tuloma's supply of product, the building of refrigerated barges, installation of two new storage terminals, the enlargement of a third storage facility and expansion of marketing outlets nationally.

American Oil Company, also an Indiana Standard affiliate, will construct a large anhydrous ammonia plant in Texas City, Tex. Both companies are wholly-owned subsidiaries of Standard of Indiana.

Construction will begin as soon as current engineering studies can be completed and contracts can be awarded.

To expand Tuloma's marketing areas, storage terminals will be built at Wood River, Ill., and at Texas City. Each terminal will have an initial capacity of 30,000 tons and be capable of handling barge and jumbo tankcar deliveries.

Another storage facility, currently

—Continued on page 59

Standard Naphthalene Unit Is Set for Toledo Location

Standard Naphthalene Products Company will establish a naphthalene processing plant in Toledo, Ohio. The South Kearny, N. J., firm has acquired a seven-and-a-half acre tract, including a 20,000-square-foot manufacturing area.

Plans call for immediate conversion of the plant into a naphthalene processing unit with full production of chipped, ball, and flake naphthalene for specialty and industrial use by the end of the year.

Drug Counterfeiting: It's There But Not Spreading

Drug counterfeiting is not spreading to new types of medicines, but there is still a good deal of bogus manufacturing going on among the old types of drugs that have long been the targets for dishonest operators.

So says Food & Drug Administration in a progress report on its crackdowns to date. Here are some of the results:

- The agency has just taken a 1,300-sample survey of drugs, believed likely candidates for counterfeiting, but not previously known to be counterfeited. No counterfeits were found in the entire batch.
- Following a survey of known types of counterfeits in February and March of this year, there were nine seizures and six criminal prosecutions. Two of the criminal cases have been terminated and four are in progress.
- Thirty-two drug stores out of a special survey of 300 known to have done business with William L. ("Tex") Palmer were found to have counterfeits in their possession. Palmer, doing business as Palmer & Co., of Houston, Tex., is said by FDA to be the largest distributor of counterfeit drugs manufactured by General Pharmacal Company, Hoboken, N.J. General Pharmacal, in turn, FDA adds, is the source of all the counterfeits whose origin has been definitely identified by Food & Drug Administration. A few samples have been shown not to come from General Pharmacal, but their source has not been identified, FDA says.

Five of the thirty-two Palmer customers

—Continued on page 56

Meeting Dates
May Be Found
On Page 9

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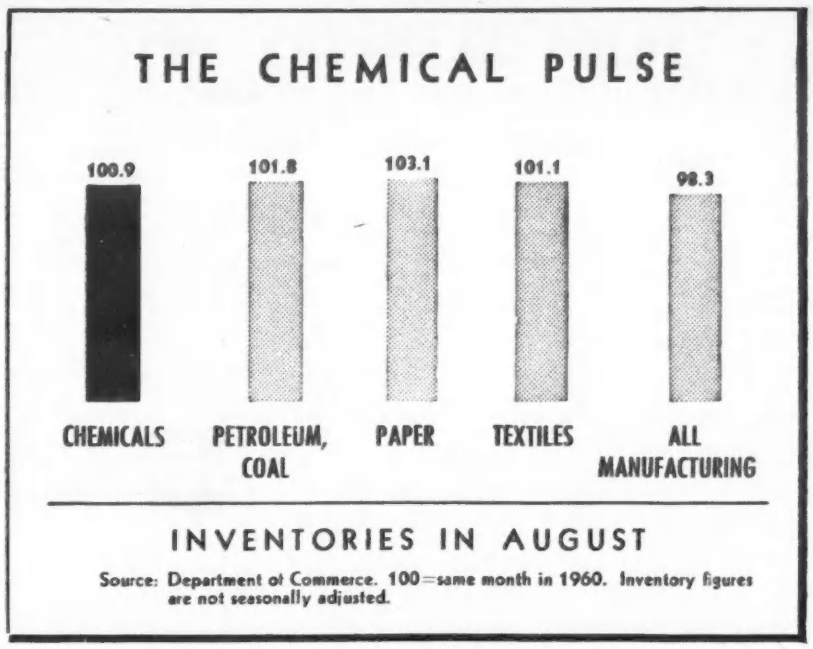

Foreign Trade Build-Up

Through several weeks now, the news pages of the nation have been laden with all sorts and sizes of reports and comments on why its government and its people should take a new look and do a new job in the direction of foreign trade under the incentive of what is going on all over the free and otherwise world. President Kennedy has revealed a program to increase US exports so as to get that balance of payments into something approaching a balance, by way of Export-Import Bank assistance that should give US exporters an even break with foreign competitors in credit sales overseas.

Some two thousand delegates to the recent convention of the National Foreign Trade Council ratified a thirty-five-page guide to US international commerce, one of the key points of which was a recommendation for a vigorous federal program to reduce or eliminate tariffs and other trade barriers "which put American exporters at a disadvantage in foreign markets" —because international trade must be in large part bartering, as is recognized in the recent push to broaden the reciprocal trade act and the declaration by the directors of the Chamber of Commerce of the United States that that organization will support legislation to reduce tariff and other barriers to "mutually beneficial" foreign trade.

The NFTC action, no doubt, was motivated by what the Undersecretary of State told the conventioners: that the United States must "repudiate protectionism and absorb the shock to certain segments of our economy if we wish to retain a role of leadership in the free world."

A little more than a week ago, the Secretary of State reached an agreement in Japan to work toward liberalizing trade between the two countries. But, the delegates of Japan to the cabinet-level joint economic conference aimed at forming a full partnership between the two countries, voiced concern over President Kennedy's "save-the-dollar" policies, and objected strongly to the US "Buy American" program. One does not have to be an expert in economic or other international relations to get the full significance of such reactions—or to foresee and avoid them.

Pharmacal Perplexities

Now that the Kefauver drug-reform campaign has got to its second consideration of why—in the "judgment" of the sponsoring senator—drugs are priced too high, those who have more than a mere passing concern for its objectives and its objectionableness, are more than ever puzzled over whether the senator has any idea of where he is going. They are pretty well satisfied, however, that his approach to wherever that may be is running far and wide over various areas of commercial and social—maybe political—economy.

Judging from what was reported on the "progress" of the campaign on page 3 herein last week and in the newspapers in that period, those who are in agreement with more or less of what the senator would like to see done, are but little, if any, more knowledgeable than he is with respect to how to get to a position from which that goal can be reached.

Evidence of that condition is clearly presented when witnesses endeavoring to support the price or patent reform get so far off the track as to make such declarations as "For many of the drugs mentioned today, information about their action on humans is frighteningly limited. Many drugs are mislabeled and misrepresented to the medical profession," and to advocate "required federal test of efficiency and usefulness before any new drug may be marketed."

How the representatives of the pharmaceutical industry, trade and profession will respond to whatever may be their concept of such wanderings when they come to bat early next month can now only be guessed at. But, it can safely be predicted that they will make a very good case for their research and other practices — including pricing — which have been so variously assailed and belittled.

Petroleum Partnerships

Representatives of five member nations attending the third general conference of the Organization of Petroleum Exporting Countries in Tehran, Iran, which closed about a fortnight ago, unanimously agreed to seek higher revenues from oil companies operating in their fields. Firm, discreet negotiations with such an objective are planned.

The nations represented—Iran, Kuwait, Qatar, Saudi Arabia and Venezuela—also decided to demand "greater participation" in the "general operations" of the oil companies.

The matter of more revenue must be regarded as an open question; but, participation of the countries in operations in their oil fields has been supported by an American lawyer who is an oil adviser to the Saudi Arabian government.

In a paper read at a recent session of the Arab Oil Congress, he expressed the personal opinion that oil-providing countries have a legal right "to oversee all major phases of exploitation within their borders by private oil companies." He called for extensive revisions in all future contracts to set up such a partnership, with "watchfulness and consultation as a matter of right," among other things, to have a voice in the sale price of their oil, and to be guarded against sharpers in the making of oil contracts.

It is readily to be seen that the construction and operation of such partnerships could contribute quite beneficially to the commercial, social—and political—economy of a number of the underdeveloped countries now being considered in the construction of free world programs with such an objective.

Meetings

American Association for the Advancement of Science, Denver, Colo., December 26-31.

American Chemical Society, national meeting, Washington, D. C., March 20-29.

American Institute of Chemical Engineers, annual meeting, Commodore hotel, New York, December 3-6.

American Petroleum Institute, annual meeting, Palmer House and Conrad Hilton and Congress hotels, Chicago, November 13-15.

American Society for Testing Materials, committee week, Statler-Hilton hotel, Dallas, Tex., February 5-9.

Association of American Soap & Glycerine Producers, annual convention, Waldorf-Astoria hotel, New York, January 24-26.

Chemical Industries Exposition, Coliseum, New York, November 27-December 1.

Chemical Market Research Association, Mark Hopkins hotel, San Francisco, November 28-December 1.

Chemical Specialties Manufacturers Association, annual meeting, Roosevelt hotel, New York, December 4-6.

Drug, Chemical & Allied Trades Association, annual dinner, Waldorf-Astoria hotel, New York, March 1.

Manufacturing Chemists' Association, semi-annual meeting and midyear conference, Commodore hotel, New York, November 21.

National Drug Trade Conference, annual meeting, Savoy-Hilton hotel, New York, November 30.

Northeastern Weed Control Conference, New Yorker hotel, New York, January 3-5.

Pharmaceutical Manufacturers Association, eastern regional meeting, Waldorf-Astoria hotel, New York, December 11-12.

Salesmen's Association of the American Chemical Industry, Christmas party, Waldorf-Astoria hotel, New York, December 13.

Society of Cosmetic Chemists, annual meeting, Biltmore hotel, New York, November 29.

Society of the Plastics Industry, plastic film, sheeting and coated fabrics conference Pierre hotel, New York, December 7-8; reinforced plastics division conference, Edgewater Beach hotel, Chicago, February 6-8; annual western section conference, del Coronado hotel, Coronado, Calif., April 4-6.

Synthetic Organic Chemical Manufacturers Association, monthly luncheon meeting, Roosevelt hotel, New York, New York, November 14.

Synthetic Organic Chemical Manufacturers Association, annual meeting and dinner, Roosevelt hotel, New York, December 7.

Toilet Goods Association, scientific section meeting, Waldorf-Astoria hotel, New York, November 29.

Washington Talks It Over

Chemical People Are Anxiously Trying to Chart the Shifting Policies of the US on Foreign Trade As the Tariff Winds Continue to Blow Every Whichway From Washington.

By Ralph L. Cherry
Washington Editor

Where are we heading, in the shifting policy on foreign trade?

That's the important question being asked in the chemical industry these days as the aftermath of a recent speech of Undersecretary of State for economic affairs, George W. Ball, before the forty-eighth National Foreign Trade Convention in New York.

The answer doesn't come easy. Speculation is rife in the build-up of energies now taking place in Washington for the big tariff hassle scheduled to break out in congress next session when the trade agreements law comes up for renewal.

Some see in the steps advocated by Mr. Ball—with White House approval—a giant move towards putting the country on a free-trade basis. He wants the President to have the power to slash tariffs across the board and break away from the traditional item-by-item approach advocated by the chemical industry.

(Injured domestic producers would be aided by federal loans, retraining of workers and easier tax terms on new equipment bought to make them more efficient.)

Others see a definite trend away from tariffs as the primary source of protection for industries hit by imports in favor of a system of protection based largely on import quotas covering groups or family groups of commodities. This trend is showing up more and more in talks in protectionist groups.

Import quotas are by no means a novel approach to remedying an import problem. They have been used with success in the case of tung oil, petroleum, lumber products from Canada and many other products. Their selling point is that they almost always work with a measureable amount of success.

How they could be made to apply to the chemical industry, however, is something few have been able as yet to figure out. For this industry, tariffs may still be the answer, but this is by no means certain.

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Current MARKET Quotations

Unless otherwise indicated, listings are first-hand quotations prevailing, according to information and belief, November 10 on large lots, f.o.b. New York, with the lowest in the left-hand column and the highest in the right-hand column. The listings do not represent bid and asked prices nor a range over the week. Differences between high and low many be accounted for by differences in quantity, quality, locality, or individual suppliers' views. An index to the weekly market reports is to be found on page 4.

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Acetanilide, tech., flaked, bbls., bgs., c.l., frt. alld lb. .32½- —
bbls., bgs. ton lots, frt. alld, lb. .33½- —
bbls., bgs., smaller lots, frt, alld lb. .36½- —
USP bbls. 225-lb dms. any quantity lb. .90 - —
100-lb. dms., any quantity lb. .92 - —
Acetic acid, coml., or redist., 28%, bbls 100 lbs 4.80 - —
56%, bbls. ..... 100 lbs 6.25 - —
70%, bbls. ..... 100 lbs 9.95 - —
80%, bbls. ..... 100 lbs.10.45 - —
glacial, syn., CP, dms., c.l., divd. E 100 lbs. 18.75 - —
tech., dms., c.l., divd. E. 100 lbs. 13.75 - —
dms., l.c.l., divd. E ... 100 lbs. 15.25 - —
tanks, divd. E ..... 100 lbs. 10.00 - —
USP, tanks, divd. E ... 100 lbs. 13.00 - —
Acetic anhydride, aluminum ret. dms., c.l., divd. E lb. .16½- —
aluminum ret. dms., l.c.l., divd E. lb. .18 - —
tanks, divd. E ..... lb. .14 - —
Acetic anhydride prices 1c. higher in West.
Acetoacetanilide, fib. dms., c.l., divd lb. .70 - —
fib. dms., l.c.l., divd ..... lb. .71½- —
Acetoacet-o-chloroanilide, fib. dms., c.l., divd lb. 1.25 - —
fib. dms., l.c.l., divd ..... lb. 1.26 - —
Acetoacet-o-toluidide, fib. dms., c.l., divd lb. .73 - —
fib. dms., l.c.l., divd ..... lb. .74½- —
Acetone, CP, dms., c.l., divd... lb. .09½- —
dms., l.c.l., divd ..... lb. .11 - —
tanks, divd. ..... lb. .07 - —
Acetonitrile, dms., c.l., frt. alld.. lb. .37½- —
dms., l.c.l., frt. alld ..... lb. .39 - —
tanks, frt. alld ..... lb. .35 - —
Acetophenetidin, USP, powd., 200-lb. dms., 1,000 lbs., frt. alld lb. 1.20 - —
100-lb dms., 1,000 lbs., frt. alld. lb. 1.22 - —
Acetophenone, cns., dms ..... lb. .42 1.30
Tech., dms., c.l., works ..... lb. .32½- —
dms., l.c.l., works ..... lb. .34 - —
tanks, works ..... lb. .30 - —
N-Acetyl-p-aminophenol, dms., t.l. (min. 23,000 lbs.), frt. adjusted lb. 1.30 - —
dms., 1,000-lb. lots, same basis.. lb. 1.40 - —
dms., 100-lb. lots, same basis.... lb. 1.54 - —
Acetylene black, imp., bgs., c.l., duty and freight extra lb. .20 - —
cs., l.c.l., ex whse ..... lb. .25½- .31
Acetylene tetrabromide, 16-dm. lots or more, f.o.b. works lb. .53 - —
Acetylsalicylic acid, USP, cryst. (20, 40 mesh), powd. (80 mesh), 250-lb. dms., c.l., pt. of shipt lb. .56¼- —
USP, 10% starch granulation, 12-50 mesh, white, 250-lb. dms., c.l., same basis lb. .56¼- —
(Pink and green granulations 5c. per lb. higher.)
Freight equald. shipt. identical quantity over standard routes, from N.Y., Phila., Midland, Mich., Chicago and St. Louis.
Acetyltributyl citrate, tech., non-ret. dms., c.l., frt. alld. E. of Denver lb. .35½- —
non-ret. dms., l.c.l., frt. alld. E. of Denver lb. .36½- —
tanks, frt. alld. E. of Denver. lb. .33 - —
Acetyltriethyl citrate, tech., non-ret. dms., c.l., frt. alld. E. of Denver lb. .39½- —
non-ret. dms., l.c.l., frt. alld. E. of Denver lb. .40½- —
tanks, frt. alld. E. of Denver. lb. .37 - —

ACIDS
Acid quotations are listed individually. For example, prices on Acid, cresylic, may be found in the C's under Cresylic acid.

Aconite root, bls. ..... lb. .50 - .55
Acrolein, tech., dms., c.l., works lb. .36 - —
dms., l.c.l., works ..... lb. .36¾ - —
tanks, works ..... lb. .31 - —
Acrylamide, dms., t.l., f.o.b. works. lb. .58 - —
dms., l.t.l., same basis ..... lb. .60 - —
Acrylic acid, glacial, dms., c.l., t.l., divd lb. .42½- —
dms., l.c.l., l.t.l., divd ..... lb. .43½- —
tanks, divd. ..... lb. .40 - —
tech., esterification, tanks, frt. alld lb. .38 - —

Abies Siberica Oil—Ammonium Bromide

Acrylic acid, tech., polymerization, tanks, same basis.. lb. .38 - —
Acrylonitrile, dms., c.l., t.l., works lb. .17½- —
dms., l.c.l., l.t.l., same basis .... lb. .18½- —
tanks, same basis ..... lb. .14½- —
Adeps lanae (see lanolin).
Adipic acid, bgs., c.l., divd ..... lb. .29 - —
bgs., l.c.l., divd. ..... lb. .31¾- —
Agar, USP, Kobe No. 1, strip, bls. lb. 2.60 - 2.80
powd., 30 mesh., fib. dms lb. 2.40 - 2.60
dl-Alanine, dms., 100-lbs. or more, f.o.b. works lb 5.25 - —
dms., 1-99 lbs., same basis lb.10.00 - —
Aldol, 95%, dms., l.c.l., works lb. .28 - —
Aldrin, tech., fib. dms., c.l., t.l. dlvd lb. .99 - —
fib. dms., l.c.l., divd. lb. 1.04 - —

ALCOHOLS
Alcohol quotations are listed individually. For example, prices on Alcohol, furfuryl, may be found in the F's under Furfuryl alcohol.

Aletris root, bgs ..... lb. 1.50 - 1.75
Algin (see Sodium alginate)
Alizarin (see 1,2-Dihydroxy anthraquinone).
Alkali blue dry, 250-lb. bbls., divd. E. of Rockies lb. 2.45 - —
Alkali blue prices 1c. higher W. of Rockies.
Allethrin, 90%, dms., frt. alld lb.28.80 -28.90
Soln., 20%, dms., 200-2,000 lb. lots, frt. alld lb. 6.50 - 6.55
2½% dms. frt alld. ..... lb. .95 - 1.10
Allspice oil (see Pimento oil).
Allyl alcohol, dms., c.l. divd..... lb. .32½- —
dms., l.c.l., divd..... lb. .34 - —
tanks, divd. ..... lb. .30 - —
Allyl bromide 55-lb cbys 5,005 lbs. or more, works lb. 1.50 - —
55-lb. cbys., 1,045 to 4,950 lbs. works lb. 1.53 - —
55-lb. cbys., 55 to 990 lbs. works. lb. 1.60 - —
Allyl chloride, dms., c.l., divd ... lb. .17½- —
dms., l.c.l., divd..... lb. .19 - —
tanks, divd ..... lb. .15 - —
Allyl isothiocyanate (see Mustard Oil, syn.).

Abbreviations
Used in OPD Market Quotations

alld.	allowed	distr.	distributor	No.	number
amorph.	amorphous	djns.	demijohns	nom.	nominal
AMP	American melting point	divd.	delivered	o-	ortho
anhyd.	anhydrous	dms.	drums	ord.	ordinary
AOAC	Association of Official Agricultural Chemists	dom.	domestic	oz.	ounce
		E.	east	p-	para
a.p.a.	available phosphoric acid	e.p.	end point	Pac.	Pacific
		equald.	equalized	pf.	proof
approx.	approximately	exp.	expressed	phos.	phosphate
artif.	artificial	Ext.	external	photo.	photographic
ASTM	American Society for Testing Materials	F.	fahrenheit	pkgs.	packages
		ferment.	fermentation	powd.	powdered
		f.f.a.	free fatty acid	precip.	precipitated
Atl.	Atlantic	f.f.c.	free from chlorine	prod.	producer
Be.	Baume	fib.	fiber	pt.	point
bbls.	barrels	f.o.b.	free on board	pulv.	pulverized
bgs.	bags	f.p.a.	free of prussic acid	purif.	purified
bls.	bales	frt.	freight	redist.	redistilled
bots.	bottles	gal.	gallon	refd.	refined
b.p.	boiling point	gran.	granular	refy.	refinery
b.p.l.	bone phosphate of lime	grd.	ground	reg.	regular
		i.&a.	iron and aluminum	resub.	resublimed
b.r.	boiling range			ret.	returnable
bxs.	boxes	i.b.p.	initial boiling point	SD	specially denatured
C.	centigrade	imp.	imported		
cbys.	carboys	incl.	included	s.d.	single distilled
CD	completely denatured	indust.	industrial	S E.	southeast
		kgs.	kegs	sec.	secondary
c.i.f.	cost, insurance, freight	l-	laevo	secs.	seconds
		lacq.	lacquer	s.g.	specific gravity
cks.	casks	lb.	pound	shipt.	shipment
c.l.	carlots	l.c.l.	less carlots	soln.	solution
cns.	cans	l.t.l.	less truckload	s.u.	standard unit
coml.	commercial	liq.	liquid	syn.	synthetic
conc.	concentrated	mfrs.	manufacturers	tanks.	railroad tankcars
CP	chemically pure	m-	meta	tech.	technical
cps.	centipoises	m.a.p.	mixed aniline point	tert-	tertiary
cryst.	crystalline			t.l.	truckloads
cs.	cases	min.	minimum	t.w.	tankwagons
ctns.	cartons	m.p.	melting point	USP	U. S. Pharmacopoeia
cyls.	cylinders	N-	nitrogen		
d-	dextro	n-	normal	vis.	viscosity
dbl.	double	nat.	natural	VM&P	varnish makers & painters
denat.	denatured	neut	neutral		
dest-dist.	destructively—distilled	NF	National Formulary	W.	west
		NNR	New and Nonofficial Remedies	whse.	warehouse
dl-	dextro-laevo			w.w.	water-white
dist.	distilled				

A unit-ton is 2,000 pounds of 1 percent of the basic constituent or other standard of the material. The percentage figure of the basic constituent multiplied by the price figure shown gives the price of 2,000 pounds of the material.

Almond oil, artif., bitter (see Benzaldehyde)
Almond oil, nat., bitter, f.p.a., bots. lb. 2.75 3.45
NF, bots. ..... lb. 3.00 3.30
sweet, USP, cns., dms..... lb. .60 .70
Aloe, Cape, cs. ..... lb. .35 - .40
powd., cs. ..... lb .60 - .65
Curacao, kgs. ..... lb. .75 - —
powd., kgs. ..... lb. .85 - —
Aloin, USP, bbls., dms., kgs..... lb. 3.25 - 3.75
Alphanaphthol (see a-Naphthol).
Alphanaphthylamine (see a-Naphthylamine).
Alphanitronaphthalene (see a-Nitronaphthalene).
Alphapicoline (see a-Picoline).
Alphaterpinol (see a-Terpinol).
Alphatocopherol (see a-Tocopherol).
Alum ammonium, gran., bgs., c.l., works..100 lbs. 4.80 - —
Lump, dms., works..... 100 lbs. 5.55 - —
Powd., dms., works..... 100 lbs. 5.70 - —
Alum potassium, gran., bgs., c.l., works..100 lbs. 5.05 - —
Lump, dms., works..... 100 lbs. 5.80 - —
Powd., dms., works..... 100 lbs. 5.95 - —
Alum, potash-chrome, dms ..... lb. .17 - —
Alumina, calcined, bgs., c.l., works. lb. .0530- —
bgs., l.c.l., works ..... lb. .0655- .0830
Aluminum acetate, basic, fib. dms., l.c.l., works lb. .54 - —
Aluminum chloride coml., anhyd., dms., c.l., works, frt. equald lb. .16 - —
dms., l.c.l., works ..... lb. .16½- —
cryst., dms., c.l., works 100 lbs.21.00 - —
dms., l.c.l., works 100 lbs.21.50 - —
Soln., 32° cbys., c.l., works .. lb. .0495- —
cbys., l.c.l., works ..... lb. .0570- .1030
tanks, works 100 lbs. 3.95 - —
NF, gran. dms. works lb. .31 - .38
Aluminum fluoride tech., anhyd., bgs., c.l., works lb. .16¼- —
bgs., l.c.l., works ..... lb. .17¼ - 19¼
bulk, c.l., basis 80% ..... lb. .14½- —
Aluminum fluoride in fib. dms. 0.35c per lb. higher
Aluminum formate, basic soln., containers extra, c.l., works. 100 lbs.11.00 - —
containers extra, l.c.l., works. 100 lbs.11.50 - —
Aluminum hydrate, heavy, bgs., c.l., frt. equald lb. .0370- —
bgs., 20,000-40,000 lb. lots, same basis lb. .0395- —
bgs., 2,000-20,000 lb. lots, same basis lb. .0495- —
bulk, c.l., same basis ..... lb. .0330- —
Light, bgs., c.l., t.l., works..... lb. .08 - —
bgs., t.l., to c.l., works..... lb. .09 - —
bgs., l.t.l., works ..... lb. .10 - —
Aluminum hydroxide, dried, USP XV, fib. dms., works lb. .82½- —
fib. dms., contract, works lb. .79½- —
gel, pharmaceutical, 14-15% Al_2O_3, fib. dms., works lb. .22 - —
9-9½% Al_2O_3, fib. dms., works. lb. .19 - —
fib. dms. contract, works lb. .18 - —
Aluminum hydroxide, tech., powd., (see Aluminum hydrate).
Aluminum metal, 99½% + 30-lb. ingots, 10,000-lb. lots, frt. alld. lb. .2610- —
50-lb. pigs, 10,000-lb lots, frt alld. lb. .24 - —
Aluminum oxide, amorphous (see Alumina, calcined)
Aluminum paste lining, extra-fine, 200-lb. dm., divd. lb. .70 - —
Standard lining, dms ..... lb. .47½- —
Aluminum powder, lining, extra-fine, 250-lb. dm., divd. lb. 1.12 - —
Standard lining, dms ..... lb. .82 - —
Aluminum resinate, precip., 2.1% Al, dms. lb. .45 - —
Aluminum stearate, dibasic, ctns., c.l. lb. .39 - —
ctns., l.c.l. ..... lb. .40 - .44
Monobasic, ctns., c.l. ..... lb. .39 - —
ctns., l.c.l. ..... lb. .40 - .44
Tribasic, ctns., c.l. ..... lb. .39 - —
ctns., l.c.l. ..... lb. .40 - .44
Aluminum sulfate, coml., grd., bgs. c.l., works, frt. equald ton.41.00 - —
bulk, c.l., same basis ..... ton.40.00 - —
lump, bgs., c.l., same basis ton.44.00 - —
iron-free, bgs., c.l., works, frt. equald 100 lbs. 3.80 - —
bgs., l.c.l., works, frt. equald. 100 lbs. 4.30 - 5.30
USP, gran., 400-lb. dm., works. lb. .30 - —
USP, powd., dms., works ..... lb. .27 - —
Aluminum sulfate prices $1 per ton higher in the South.
Aluminum trihydrate, heavy (see Aluminum hydrate, heavy).
Ambergris, gray, bots ..... oz. 6.50 -10.00
p-Aminoacetanilide, tech., paste, dms., frt. alld lb. 1.57 - —
Aminoacetic acid, NF, bbls., frt. adjusted lb. 1.35 - 1.60
Aminoazotoluene base, bbls., 100% basis lb. 1.15 - 1.18
p-Aminobenzoic acid, tech., dry, dms., works lb. 1.72 - —
2-Amino-4-chlorophenol, tech., solid, dms., frt. alld lb. 2.15 - 3.85
p-Aminodiphenylamine, tech., solid, dms., frt. alld lb. 3.00 - —
Aminoethyl ethanolamine, dms., c.l., divd lb. .475 - —
dms., l.c.l., divd ..... lb. .49 - —
tanks, divd. ..... lb. .45 - —
2-Amino-2-methyl-1-propanol, dms., c.l., frt. alld lb. .44 - —
dms., l.c.l., frt. alld..... lb. .45 - —
tanks, frt. alld. ..... lb. .42 - —
m-Aminophenol, dist., dms., ton lots. lb. 2.05 - —
dms., smaller lots. ..... lbs. 2.50 - —
p-Aminophenol, dms., frt. alld.. lb. 1.25 - —
Aminophylline, USP, 100-lb. dm., frt. alld. lb. 3.25 - —
p-Aminosalicylic acid, dms., 100 lbs. or more, frt. adjusted lb. 3.40 - —
Ammonia, anhyd., fertilizer, tanks, works, frt. equald. E. of Rockies. ton.92.00 - —
refrigeration, tanks, works, frt. equald. E. of Rockies ton.94.50 - —
Aqueous, 29.4%, tanks, works, anhyd. basis, E. of Rockies. ton.95.00 - —
Ammoniacal liquor (see Ammonia, aqueous).
Ammoniac, sal., gray, bgs., c.l. works, frt. equald 100 lbs. 8.25 - —
bgs., l.c.l., same basis 100 lbs. 8.65 -12.65
Ammoniac, sal., white (see Ammonium chloride, tech.)
Ammonium acetate, purif., dms lb. .43 - —
Ammonium benzoate, USP, 100-lb. dms., 1,000-lb. lots, works. lb. 1.90 - —
Ammonium biborate, gran., dms., c.l., works ton 325 - —
dms., ton lots, ex whse 100 lbs.22.86 - —
dms., smaller lots, ex whse 100 lbs.24.11 - —
Ammonium bicarbonate, dom., gran., c.l., works 100 lbs. 7.50 - —
dms., l.c.l., works 100 lbs 9.50 - —
Ammonium bichromate dms. works lb 42 - 43
Ammonium bifluoride dms. divd lb .2145 - .2248
Ammonium bromide, NF gran., dms c.l. t.l. frt equald lb 44 - —
dms. l.c.l., same basis lb 46 - —

Ammonium carbonate, USP, lump, dms., c.l. lb. .15½- —
Ammonium chloride, white, tech., fine gran. bgs. c.l. works, 100 lbs 6.00 —
bgs., l.c.l., works 100 lbs 8.00 8.45
USP, gran., 250-lb. dm lb. .20 - —
Ammonium citrate dibasic, 250-lb. dm f.o.b. works lb 77 - —
Ammonium dichromate (see Ammonium bichromate)
Ammonium fluoride (see Ammonium bifluoride)
Ammonium gluconate, tech., 200-lb. dm., f.o.b. works E lb. 45 - —
Ammonium hydroxide (see Ammonia aqeous)
Ammonium iodide, NF, 25-lb. jar, f.o.b. works lb. 4.51 - —
Ammonium lauryl sulfate, dms., c.l., frt. alld lb. .20½- —
dms., l.t.l., frt. alld lb .21½- —
tanks, frt alld lb. .19½- —
Ammonium lignin sulfonate, bgs., bgs, l.c.l., works 100 lbs. 3.75 - 4.25
bgs. l.c.l. works 100 lbs. 3.40 3.65
Ammonium linoleate, 80%, dms., works lb. .50 .55
Ammonium molybdate, CP, cryst., 400 lb dms. 15,000-lbs works, lb. 1.33 - —
400-lb dms., 2,000-lb contracts, work lb. 1.36 - —
400-lb dms. works lb. 1.37 - —

Ammonium nitrate, dom., fertilizer grade, 33.5% N. bgs., f.o.b. works ton.67.00 - —
dom., with dolomite, 20.5% N, bgs., c.l., Hopewell, Va ton.44.00 - —
imp., Canadian, 33.5% N. eastern, bgs., c.l., ship't point frt. equald to $3 ton base price ton.67.00 - —
Ammonium oxalate, tech., fine gran., 250-lb dm., f.o.b works E lb. .28½- —
Tech., powd., 200-lb. dm., same basis lb. .28½- —
Ammonium pentaborate, gran., bgs., c.l., works ton 193.00 - —
bgs., ton lots, ex whse 100 lbs.15.27 - —
bgs., smaller lots, ex whse 100 lbs.16.52 -18.52
Ammonium pentaborate powder $10 per ton higher in bags.
Ammonium persulfate, tech., dms., 10-ton lots or more, works lb. .18 - —
dms., smaller lots, works lb. .20 .23
Ammonium phosphate, comi., bgs., c.l., works, frt. equald lb. .09¼- —
bgs., l.c.l., same basis lb. .10 - —
Ammonium phosphate, dibasic, NF., V, bbls., dms lb. .46 - —
Dibasic, tech., bgs., c.l., works, frt. alld lb. .09¼- —
Ammonium silicofluoride, dms., works lb. .12¼- .13¼
Ammonium sulfamate, bgs., c.l., t.l., works lb. .19 - —
bgs., l.c.l., works lb. .20½- .27

Ammonium sulfate, standard granular, bulk, f.o.b. works, base price ton.32.00 - —
Purif., c.l., 100-lb. bgs., f.o.b. works lb. .08½- —
Ammonium sulfate, large granular, bulk, c.l., works ton.35.00 - —
bgs., c.l., works ton.40.00 - —
Tech., bulk, c.l., t.l., works ton.52.00 - —
bgs., c.l., t.l., works ton.56.00 - —
bgs., l.c.l., l.t.l., works 100 lbs. 3.20 - 5.20
Ammonium sulfide, liq., 40-44%, tanks, frt. equald., 100% basis, ton.160.00 - —
Ammonium sulfocyanide, tech. (see Ammonium thiocyanate)
Ammonium thiocyanate, tech., cryst. dms., c.l., works lb. .20 - —
dms. l.c.l., works lb. .22 .26
Tech. soln., 50%, tanks, frt. equald., basis ammonium thiocyanate content lb. .17¼- —
Ammonium thioglycolate, comi., 55-gal. dms., ton lots, 100% basis lb 1.15 - —
d-Amphetamine hydrochloride, monobasic, dms lb.17.50 -23.50
dl-Amphetamine hydrochloride, dibasic dms lb. 4.50 6.00
d-Amphetamine phosphate, 6b. dms., 100-lb. lots lb.15.00 - —
dl-Amphetamine phosphate, dms.lb 4.20 5.60
d-Amphetamine sulfate, 6b. dms. lb.15.00 -17.00
dl-Amphetamine sulfate, 6b. dms., lb. 4.20 5.60
Amyl acetate, ex fusel oil, tech., dist., from 125° to 150°C., dms. c.l., frt alld E of Rockies lb. .18½- .19
dms., l.c.l., same basis lb. .20 - .20½
tanks, same basis lb. .16 - .16½

Amyl acetate, ex pentane, reg., dms., c.l., dlvd. lb. .19 - —
dms., l.c.l., dlvd. lb. .21¼- —
tanks, dlvd. lb. .16½- —
Tech., dms., c.l., dlvd. lb. .17 - —
dms., l.c.l., dlvd. lb. .18½- —
tanks, dlvd. lb. .14½- —
Syn., oxo process, dms., c.l., dlvd. lb. .19 - —
dms., c.l., dlvd. lb. .20½- —
tanks, dlvd. lb. .16½- —
Amyl alcohol, ex fusel oil (see Fusel oil refd).
Amyl alcohol, ferment, refd., 128°-132°C., dms., l.c.l., dlvd lb. .43½- —
refd., ACS grade, dms., l.c.l., dlvd lb. .45½- —
ex pentane, mixed amyls, dms., c.l., frt. alld lb. .19 - —
dms., l.c.l., frt. alld lb. .20½- —
tanks, frt. alld. lb. .16½- —
Primary, dms., c.l., frt. alld. lb. .20¼- —
dms., l.c.l., frt. alld. lb. .21¾- —
tanks, frt. alld lb. .17¾- —
Sec-synthetic, dms., c.l., works, frt. alld lb. .19 - —
dms., l.c.l., same basis lb. .20½- —
tanks, same basis lb. .17 - —
Tert-synthetic, dms., c.l., frt. alld. E lb. .17 - —
dms., l.c.l., frt. alld. E. lb. .18½- —
tanks, frt. alld E. lb. .14½- —
1-pentanol (syn. normal), dms., c.l., works lb. .41½- —
dms., l.c.l., works lb. .43 - —
tanks, works lb. .39½- —
2-pentanol, dms., c.l., works lb. .65 - —
dms., l.c.l., works lb. .70 - —
tanks, works lb. .60 - —
Amyl n-butyrate, dms. lb. 1.00 - 1.25
Amyl cinnamic aldehyde, dms lb. 1.70 2.20
p-tert Amyl phenol, dms., c.l., works, lb. .28 - —
dms., l.c.l., works lb. .29 - —
Amyl salicylate, cns., dms. lb. .71 - —
Amyris oil, dms. lb. 1.40 - 1.50
Anethol tech., dms. lb. .80 - .92
USP, cns., dms. lb. 1.05 - —
Angelica root, bls. lb. .50 - 1.00
Angelica root oil, bots. lb.120.00 -140.00
Angelica seed oil, bots. lb.120.00 -130.00
Aniline, dms., c.l., frt. alld. lb. .17 - —
dms., l.c.l., same basis lb. .18 - —
tanks, same basis lb. .15 - —
Aniline oil (see Aniline).
Aniline salt, dms., c.l., t.l., 20,000 lbs min., frt. alld lb. .33 - —
dms., l.c.l., same basis lb. .35 - —
Anise oil, USP, dms lb. 1.90 - 3.00
Anise seed, Turkish, bgs. lb. .30 - —
Spanish, bgs. lb. .40 - —
Anisic aldehyde, dms lb. 1.50 - 2.20
o-Anisidine, dms., c.l., frt. alld lb. .80 - —
dms., l.c.l., same basis lb. .82 - —
tanks, same basis lb. .78 - —
p-Anisidine, dms., works lb. .97 - —
Anthracene, 90-95%, dms., c.l., t.l. f.o.b., works lb. .42½- —
dms., l.c.l., minimum shipment 1,000 lbs., same basis lb. .45 - —
Anthranilic acid, 99%, 150-lb. dms., dlvd lb. 1.15 - —
Anthraquinone, 99.5% bgs., c.l., frt. alld lb. .70 - —
bbls., l.c.l., same basis lb. .73 - —
Electrical grade, bgs. l.c.l., same basis lb. 1.10 —
Antimony butter (see Antimony trichloride).
Antimony metal, bulk, c.l., mines, lb. .32½- —
cs., c.l., mines lb. .33 - —
Antimony oxide, bgs., c.l., frt. alld, lb. .30 - —
bgs., l.c.l., frt. alld lb. .31½- —
Prices of antimony oxide are 2c. higher west of the Rockies.
Antimony sulfide, approx. 65%, bgs., 10,000-lb. lots, dlvd lb. .23 - —
bgs., smaller lots, dlvd lb. .24 - .26
Antimony trichloride, anhyd., solid, pails, c.l., works lb. .44½- —
pails, l.c.l., works lb. .46½- —
Antimony-potassium tartrate, tech., powd., 250-lb., dm., f.o.b. works, E lb. .69½- —
USP, powd., 250-lb dm., same basis lb. .74½- —
Apomorphine hydrochloride, USP, bots., 25-oz. lots oz.35.60 - —
Apricot kernel oil, USP, dms lb. .55 - .70
Arabic gum, amber sorts, 10 bgs. lb. .21 - .23
USP, powd., bbls lb. .27 - .30
Areca nuts, powd., bbls lb. .18 - .20
Arecoline hydrobromide, NF, bots., tins, 100 oz. or more oz. 4.00 - —
l-Arginine free base, dms., 10-kilo 5-kilo lots or more kilo.60.00 - —
l-Arginine glutamate, dms., 10-kilo lots or more kilo.64.80 - —
l-Arginine monohydrochloride, dms., 5-kilo lots or more kilo.60.00 - —
Arnica flowers (true Montana), bls. lb. .75 - —
Aromatic petroleum solvents (see Solvent Naphtha, petroleum, aromatic).
Arsenic, crude (95%), bulk, c.l., works lb. .016 - —
bbls., c.l., works lb. .031 - —
Arsenic trioxide, NF, powd., dms., 300-lbs., f.o.b. works lb. .48 - —
Arsenic, white, powd., bbls., c.l., works lb. .04½- —
bbls., l.c.l., works lb. .06½- .07½
Arsenous acid, tech. (see Arsenic, white).
Arsenous acid, USP (see Arsenic trioxide).
Arylid maroons, deep shades, bbls. lb. 3.70 - —
Light shades, bbls. lb. 2.85 - —
Asafetida gum, cns lb. .36 - .40
Powd., bbls., dms lb. .75 - .80
Asbestine (see Talc, fibrous, New York).
Asbestos, Canadian crude
6D, c.l. (30 tons), mines ton.86.00 - —
7D, c.l. (30 tons), mines ton.75.00 - —
7F, c.l. (30 tons), mines ton.71.00 - —
7H, c.l. (30 tons), mines ton.61.00 - —
7K, c.l. (30 tons), mines ton.50.00 - —
7M, c.l. (30 tons), mines ton.44.00 - —
7R, c.l. (30 tons), mines ton.43.00 - —
7RF c.l. (30 tons), mines ton.44.00 - —
7T, c.l. (30 tons), mines ton.41.00 - —
7TF c.l. (30 tons) mines ton.44.00 - —
Asbestos prices are in Canadian funds; l.c.l. lots $4 per ton higher.
Ascorbic acid, USP, dms., 100-kilos. kilo. 5.60 - —
dms., less than 100-kilos kilo. 5.85 - —
Ash, black (see Barium sulfide)
Asphalt, gilsonite, black jet, bgs., c.l., mines ton.43.00 - —
ex-whse, 5 tons or more, N. Y., N. J. ton.89.50 - —
select, brilliant black, 340°-360°F. fusing pt., bgs., c.l., mines, ton.46.00 - —
270°-295°F. fusing pt., bgs., c.l., mines ton.43.00 - —
Asphalt, petroleum, cut-back, tanks, tank-wagon, refy gal. .09½- —
emulsion, tanks, tankwagon refy. gal. .09½- —
steam-refd., 50-80 penetration, tanks, tankwagon, refy ton.21.00 - —
85-300 penetration, tanks, tankwagon refy ton.20.00 - —
Aspirin (see Acetylsalicylic Acid)
Atropine, NF, tins oz. Nom.

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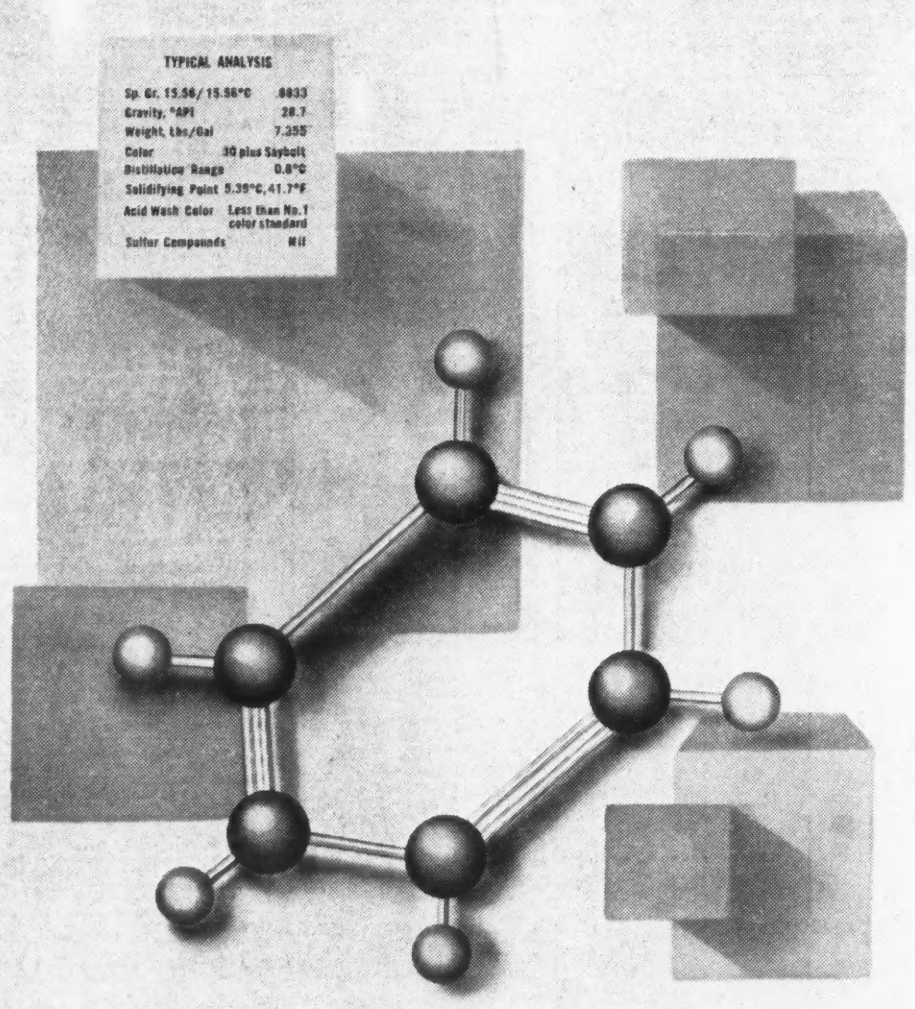

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CORPUS CHRISTI • CHICAGO • CHARLESTON, S. C. • BATON ROUGE • HOUSTON

Atropine sulfate, USP, bots, 10 oz. lots oz. 5.25 - —
Azelaic acid, bgs., c.l., dlvd. lb. .37 - —
bgs., ton lots, same basis lb. .38 - —

B

Bacitracin, sterile, over 500,000,000 units 50,000 units. .90 - —
non-sterile, over 500,000,000 units. 50,000 units. .65 - —
Balm of Gilead buds, dried, bgs lb. 1.25 1.35
Barberry root bark, bgs lb. 1.00 1.10
Barbital, NF 100-lb dms., f.o.b. works lb. 4.50 —
Barbital sodium, NF, 100-lb dms. lb. 4.75 - —
Barium carbonate, precip., bgs., c.l., works ton.111.50 - —
bgs., smaller lots, works ton.126.50 —
Barium chlorate, dms., works lb .32 .41
Barium chloride anhyd., bgs., c.l., works ton.176.00 - —
bgs., t.c.l., works ton.196.00 - —
NF, cryst., dms., 400-lbs., works lb. 23 - —
Tech cryst. bgs c.l. works. 100 lbs. 7.00 - —
bgs., t.c.l. works 100 lbs. 8.00 - —
Barium chromate, bgs., frt. equald. lb. .38 - —
Barium dioxide (see Barium peroxide).
Barium hydrate, cryst., bgs., c.l. t.l., frt. equald ton.208.00 - —
bgs., t.c.l., t.l. frt equald ton.218.00 - —
Barium monohydrate, 99%, bgs., c.l. frt equald 100 lbs.11.25 - —
bgs., t.c.l., frt equald 100 lbs.11.75 - —
Barium monoxide (see Barium oxide)
Barium nitrate bbls. c.l., t.l. dlvd lb. .16 - —
bbls., t.c.l., t.l.c. dlvd lb. 17 - —
Barium oxide, grd., dms., c.l., t.l., frt equald ton275.00 - —
dms. t.c.l. t.l.l. frt equald ton.285.00 - —
Barium peroxide, dms. frt equald. lb .20 —
Barium stearate, ctns. c.l. frt alld. lb .41 —
ctns. t.c.l. same basis lb. .42 .46
Barium sulfate, tech (see Barytes and blanc fixe)
Barium sulfate, X-ray, 100-lb dm. lb. .19 - —
Barium sulfide, dms. c.l. works. ton.100.00 —
dms., t.c.l. works ton 110.00 —
Barytes, southern, off-color, bgs. mines ton 30.00 - —
95-75% bgs., mines ton.30.00 - —
white water-grd paper bgs. c.l. St. Louis ton.60.00 -60.25
paper bgs. ex whse New York ton.84.85 —
Battery acid, chys., c.l., works, E. 100 lbs 2.35 —
chys. t.c.l., works, E 100 lbs 2.65 -10.95
Bauxite, bulk, mines ton 7.00 -10.00
Bay oil, NF, Puerto Rican 50-55% cns lb. 3.75 - —
NF, Dominica, 50-55%, cns., dms lb. 3.60 - 4.50
Bayberry wax, bgs lb. .65 .70
Beeswax, crude, African, bgs. lb. .53 - .54
Brazilian, bgs. lb. .57 - .58
Central American, bgs lb. .55 - .56
Chilean, bgs. lb. .59 Nom.
Refd USP, bleached white, bricks 100-lb ctns lb. .67 - .69
white, slabs, 100-lb ctns lb. .66 - .68
yellow, bricks, 100-lb. ctns lb. .60 - .62
yellow, slabs, 100-lb. ctns lb. .59 - .61
Belladonna leaf, bls lb. .25 - .30
Belladonna root, bls lb. .35 - .38
Bentonite, dom 200 mesh, bgs. c.l., mines ton.14.00 - —
Imp. Italian, white, high gel., bgs., 5-ton lots, ex whse ton.95.20 - —
bgs., 1-ton lots, ex whse ton.99.00 - —
Imp. Italian, white, low gel., bgs., 5-ton lots, ex whse ton.93.40 - —
bgs. 1-ton lots ex whse ton.97.16 - —
Benzal chloride, chys., works lb. .44 - —
Benzaldehyde, NF, dms lb. .74 - —
Tech., dms., c.l., t.l. lb. .42 - —
dms., t.c.l. lb. .44 - —
Benzene, industrial or nitration, tanks, works:
Baton Rouge, La. gal. .31 - —
Bethlehem, Pa. gal. .31 - —
Birmingham district gal. .31 - —
Chicago district gal. .31 - —
Cleveland district gal. .31 - —
Geneva, Utah gal. .31 - —
Houston, Tex. gal. .31 - —
Johnstown, Pa. gal. .31 - —
Lackawanna, N. Y. gal. .31 - —
Lone Star, Tex. gal. .31 - —
Lorain, Ohio gal. .31 - —
Mennequa, Colo. gal. .31 - —
Middletown, Ohio gal. .31 - —
Philadelphia district gal. .31 - —
Pittsburgh district gal. .31 - —
Port Arthur, Tex. gal. .31 - —
St. Louis, Mo. District gal. .31 - —
Sparrows Point, Md. gal. .31 - —
Syracuse, N. Y. gal. .31 - —
Terre Haute, Ind. gal. .31 - —
Youngstown, Ohio gal. .31 - —
Benzene hexachloride 25% and 99% gamma isomer (see Lindane).
Benzene hexachloride, tech., high gamma, bgs., c.l., t.l., consignment, dlvd. gamma-unit. .0075 —
bgs., c.l., t.l., direct sale, f.o.b. works gamma-unit. .0065- —
Tech., low gamma, bgs., c.l., t.l., consignment, dlvd gamma-unit. .0075- —
bgs., c.l., t.l., direct sale, f.o.b. works gamma-unit. .0056- —
Benzidine hydrochloride, bbls., c.l., frt alld., 100% basis lb. 1.19 - —
bbls., t.c.l., same basis lb. 1.21 - —
Benzidine sulfate, tech., bbls., frt. alld. 100% basis lb. 1.21 - —
Benzidine yellow, AAA, bbls., dlvd. lb. 2.20 - —
AAOT, bbls., dlvd. lb. 2.55 - —
Lightfast, bbls., dlvd. lb. 3.40 - —
Benzocaine, dms. 100-lbs., frt alld. lb. 3.25 - —
Benzoic acid, tech. dms., c.l., t.l., frt. alld. lb. .20 - —
dms., t.c.l., t.t.l., same basis lb. .24 - —
USP, bbls., dms., ton lots lb. .48 - —
bbls. dms. 1,000-lb lots lb. .50 - —
Benzoic acid in bags, ½c. lower.

BENZOL
Benzol quotations, both coaltar and petroleum, may be found under Benzene.

Benzoin gum, Sumatra, cs. lb. .32 —
Benzophenone, dms lb. 1.35 - 1.40
Benzotriazole, tech. dms. 1,000-lb lots, works lb. 1.93 - —
Benzotrichloride, chys. 1,000-lb lots or more, frt equald lb. .21 - —
chys. smaller lots frt. equald lb. .23 - —
Benzoyl chloride, chys. dms., c.l., works, frt. equald lb. .22 - —
chys., t.c.l., same basis lb .23 - —
tanktrucks, dlvd Metropolitan area lb. .21 - —
Benzoyl peroxide, purif. flb. dms., 50 to 1,000-lb lots, works lb. .98 - 1.08

Bismuth chloride, jars lb. 5.11 - —
Bismuth hydroxide, dms lb. 4.60 - 4.65
Bismuth metal, bxs, ton lots lb. 2.25 - —
Bismuth nitrate, cryst., 200-lb. dm. lb. 2.25 - —
Bismuth oxychloride, 25-lb. dm., f.o.b. works lb. 4.92 - —
Bismuth subcarbonate, USP, 25-lb. dm., f.o.b., works lb. 3.70 - —
Bismuth subgallate, NF, 200-lb. dm., f.o.b. works lb. 3.96 - —
Bismuth subiodide, fib dms lb. 5.37 - —
Bismuth subnitrate, NF, 200-lb. dm., f.o.b., works lb. 3.10 - —
Bismuth subsalicylate, USP, 100-lb. dm., f.o.b. works lb. 4.15 - —
Bismuth trioxide, 100-lb. dms., f.o.b works lb. 4.40 - —
Bismuth-ammonium citrate, USP, powd., jars lb. 4.22 - —
Bisphenol-A, bgs., c.l., t.l., single shipt., 70,000-lbs. or more, frt. alld lb. .30½- —
bgs., c.l., t.l., less than 70,000-lbs., same basis lb. .31 - —
bgs., t.c.l., same basis lb. .32½- —
Blackberry root bark, nls lb. .50 .55

BLACK PIGMENTS
Black pigment quotations are listed individually. For example, prices on Acetylene black, may be found in the A's under Acetylene black.

Blanc fixe, direct process, bgs., c.l., works ton.160.00 —
bgs., t.c.l., works ton.170.00 —
bgs., t.c.l., New York whse ton.215.00 —
Blood, dried, 16-16½% ammonia bgs., New York unit-ton 5.50 —
Bloodroot, bls. lb. .80 - .85

BLUE PIGMENTS
Blue pigment quotations are listed individually. For example, prices on Blue, ultramarine, may be found in the U's under Ultramarine blue.

Blue dyes (see Dyes)
Blue vitriol (see Copper sulfate)
Bois de rose oil, Brazilian, dms lb. 1.90 - —
Peruvian, dms. lb. 1.65 —
BON acid, maroons, pure, bbls lb 1.75 —
Resinated, bbls. lb 1.50 —
Bonemeal, steamed, works, E ton.100.00 —
Bone black, dms., c.l., frt. alld lb .1750- .2225
t.c.l., works lb. .1950- .2425
Pacific coast bone black prices 3¼c. per lb. higher.
Bone phosphate, defluorinated of lime (see Defluorinated phosphate).
Bone phosphate, precip (see Calcium phosphate, tribasic)
Borax, tech., anhyd., 99½%, bgs., c.l., works ton.92.00 - —
bgs., ton lots, ex whse, New York or Chicago 100 lbs. 7.67 - —

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Borax, tech., anhyd., 99½%, bgs., smaller lots, same basis, 100 lbs. 8.91 -10.91
bulk c.l. works ton 83.00 —
Tech., gran., decanydrate, 99½%, bgs., c.l., works ton.50.00 • —
bgs. ton lots ex whse. New York or Chicago 100 lbs. 5.31 • —
bgs. smaller lots same basis 100 lbs. 6.56 - 8.56
bulk c.l. works ton 43.50 —
Tech., pentahydrate, 99½%, bgs., c.l., works ton.64.50 • —
bgs. ton lots. ex whse, New York or Chicago 100 lbs. 6.12 • —
bgs. smaller lots same basis 100 lbs. 7.37 - 9.37
bulk. c.l. works ton 58.00 —
USP powd. bgs. c.l., works ton 54.00 • —
bgs., ton lots. ex whse. New York or Chicago 100 lbs. 6.57 • —
bgs., smaller lots, same basis 100 lbs. 7.82 - 9.82

Bordeaux powder tribasic bgs. c.l., dlvd lb. .24 • —
bgs. l.c.l., same basis lb .26 • —

Boric acid tech anhyd 99.9% bgs., c.l. works ton.335.00 • —
bgs ton lots ex whse New York or Chicago 100 lbs.21.27 • —
Tech. anhyd., 99%, bgs., smaller lots, same basis 100 lbs.22.52 -24.52
cryst. 99.9% bgs. c.l. works. ton.163.50 —
Tech., cryst., 99.9%, bgs., ton lots, ex whse., New York or Chicago 100 lbs.11.67 • —
bgs. smaller lots. same basis. 100 lbs.12.92 -14.92
Tech., cryst., 99.9%, dms., c.l., works ton.188.50 • —
dms., ton lots. ex whse., New York or Chicago 100 lbs.13.17 • —
dms., smaller lots, same basis 100 lbs.14.42 • —
gran., 99.9%, bgs., c.l., works. ton.112.00 • —
bgs. ton lots ex whse New York or Chicago 100 lbs. 8.78 • —
bgs smaller lots same basis 100 lbs.10.03 -12.03
dms. c.l. works ton 137.00 —
dms. ton lots. ex whse. New York or Chicago 100 lbs.10.29 • —
dms. smaller lots same basis 100 lbs.11.54 • —
bulk c.l. works ton.106.00 —
powd., bgs., ton lots, ex whse, New York or Chicago 100 lbs. 9.20 —
bgs. smaller lots same basis 100 lbs.10.45 -12.45
dms., ton lots, ex whse., New York or Chicago 100 lbs.10.71 • —
dms., smaller lots, same basis 100 lbs.11.96 • —
USP boric acid $25 per ton higher in bags.

Borneol, cns. lb 2.75 • —

Boron trichloride CP 1.800-lb. cyls., works lb 1.25 • —
100-lb cyls works lb 1.70 • —

Boron trifluoride gas, cyls., t.l., works lb. .70 • —
cyls., t.l.l. works lb. .70 • —

Brimstone (see Sulfur).

Broenner's acid bbls lb 1.53 • —

Bromine purif. cs. c.l., t.l., dlvd. E of Rockies lb. .32 • —
cs. l.c.l. same basis lb .34 • .39
ret dms., c.l., t.l., dlvd. E. of Rockies lb. .31 • —
ret dms. l.c.l. same basis lb. .31 • .34
tanks, same basis lb. .21½ • —

Bromochloromethane dms. c.l., frt. equald lb. .48 • —
dms. l.c.l. same basis lb. .50 • —
tanks, same basis lb .47 • —

Bromoform, pharmaceutical grade, 5-gal cby. frt. equald lb 1.95 • —

Bromstyrol bots lb 5.25 5.35

Brucine, cns. oz. .75 - 1.10

Brucine sulfate, NF, cns. oz. .65 - .85

Buchu leaves, bbls lb. .60 • .65

BROWN PIGMENTS

Brown pigment quotations are listed individually. For example prices on Brown iron oxide, may be found in the l's under iron oxide brown

Butadiene (std cyls. c.l., refy cyls., l.c.l., refy lb .21 —
tanks dlvd lb .22 —
Butene 1 tanks works lb .0625 —
Butene-2 tanks works lb .0570 —
n-Butyl acetate ferment. dms., c.l., frt alld lb .17 —
dms. l.c.l. same basis lb .18½ —
tanks same basis lb .14½ —
Syn., dms., c.l., dvld. E lb. .17 • —
dms. l.c.l. same basis lb. .18½ —
tanks same basis lb. .14½ —
sec-Butyl acetate syn. dms., c.l., dlvd E lb. .14¾ —
dms. l.c.l. same basis lb. .16¼ —
tanks same basis lb. .12¼ —
n-Butyl acrylate dms. c.l. or t.l., straight or mixed frt. alld E lb. .37½ —
dms., t.l.l., same basis lb. .38½ —
tanks, same basis lb. .35 —
n-Butyl alcohol ferment. dms., c.l., frt alld lb. .18 —
dms. c.l. frt alld lb. .19½ —
tanks frt alld lb. .15½ —
Syn., dms., c.l., dlvd. E lb. .17 • —
dms., l.c.l., frt. alld lb. .19½ —
tanks, frt. alld lb. .15½ —
Sec-synthetic dms. c.l., dlvd lb. .15 —
dms. l.c.l., dlvd. lb. .16½ —
tanks dlvd lb. .12½ —
Tert-synthetic, dms., c.l., frt. alld., dlvd. E lb. .16 —
dms., l.c.l., same basis lb. .17½ —
tanks, same basis lb. .13½ —

Butyl aldehyde (see Butyraldehyde).

Butyl chloride dms. c.l., works lb. .37½ —
dms. l.c.l. works lb. .38¼ —

n-Butyl ether dms. c.l., works lb. .35¼ —
dms., l.c.l., works lb. .36 —
tanks works lb. .33¾ —

Butyl cyclohexyl phthalate, dms., c.l., frt. alld. E lb. .25 • —
dms., l.c.l., frt. ald. E lb. .26½ —
tanktrucks, 1,000 - 1,999 gals., same basis lb. .23 • —
tanktrucks, 2,000 gals., same basis lb. .22½ —

Butyl isodecyl phthalate, dms., c.l., frt. alld. E lb. .24½ —
dms., l.c.l., frt. alld. E lb. .26 • —
tanktrucks, 1,000 - 1,999 gals., same basis lb. .22½ —
tanktrucks, 2,000 gals., same basis lb. .22 • —

Butyl lactate dms c.l. frt alld E. Rockies lb. 42½ —
dms l.c.l. same basis lb. 43½ —
tanks same basis lb 40 —

Butyl laurate, dms., works lb. .37½ —

Butyl methacrylate, dms., c.l., t.l., works lb. .55 • —
dms. l.c.l., works lb. .55½ —

Butyl octyl phthalate, dms., c.l., frt. alld. E lb. .24½ —
dms., l.c.l., frt. alld. E lb. .26 • —
tanktrucks, 1,000 - 1,999 gals., same basis lb. .22½ —
tanktrucks, 2,000 gals., same basis lb. .22 • —

Butyl oleate, dms., c.l., frt. alld. lb. .26 • —
dms., l.c.l., frt. alld lb. .26½ .27

Butyl phenylacetate, dms lb. 4.50 4.60

Butyl phthalate (see Dibutyl phthalate).

Butyl stearate, CP, dms., c.l., frt. alld. E. of Rockies lb. .28½ —
dms., l.c.l., frt. alld. E. of Rockies lb. .29 - .29¾
tech., dms., c.l., same basis lb. .25¾ —
dms., l.c.l., same basis lb. .26¼ .26¾

Butylamine (see Mono-, Di- and Tri-butylamine).

tert-Butylamine, dms. c.l., t.l., t.o.b. works lb. .47 • —
dms., l.c.l., same basis lb. .47½ —
tc., t.t., same basis lb. .45 • —

Butylated hydroxyanisole, food grade, dms. dlvd. lb 4.75 • —

6-tert-Butyl m cresol (see Mono-tert-butyl-m cresol)

Butylated hydroxytoluene (see 2,6-Di-tert-butyl-p cresol)

1,3 Butylene glycol, dms. c.l., t.l., dlvd lb. .20½ —
dms., l.c.l., t.t.l., t.o.b. works lb. .22 • —
tanks, dlvd lb. .18 —

p-tert-Butylphenol, bgs., c.l., frt. alld lb. .25½ —
bgs., l.c.l., same basis lb. .26½ —
tanks, same basis lb. .23½ —

Butyraldehyde, dms., c.l., dlvd lb. .22 —
dms., l.c.l., dlvd. lb. .23½ —
tanks, dlvd lb. .19½ —

Butyric acid, 99%, dms., c.l., frt. equald lb. .34 • —
dms., l.c.l., same basis lb. .34½ —
tanks, same basis lb. .32½ —

Butyric ether (see Ethyl butyrate).

Butyrolactone, dms., c.l., t.l., works lb. .40 • —
dms., l.c.l., same basis lb .43 • —

n-Butyronitrile, dms., c.l., dlvd lb. .56½ —
dms., l.c.l., dlvd. lb. .57½ —
tanks, dlvd. lb. .54 —

C

Cacao butter (see Cocoa butter).

Cadmium CP red, dark shade, bbls., frt alld E. of Rockies lb 5.55 • —
Light shade bbls same basis lb 4.65 • —
Medium shade, bbls., same basis. lb. 5.30 • —
Medium, light shade, bbls., same basis. lb. 4.90 • —
Orange-red shade, bbls same basis lb 4.30 • —
Yellow all shades bbls frt alld E. of Rockies lb. 3.02 • —

Cadmium chloride 400-lb dms., f.o.b. shipping point lb. 1.56½ —

Cadmium iodide 25-lb fib dms lb 6.75 7.00

Cadmium metal ingots or sticks, ton lots, cs. dlvd lb 1.60 • —

Cadmium nitrate purif cryst 400-lb. dms., less than 5,000 lbs. f.o.b shipping point. lb. .94 • —
400-lb dms. 5,000 lbs or more, same basis lb. .90 • —

Cadmium mercury lithopone orange, deep shade bbls frt alld E. of Rockies lb. 1.73 • —

Cadmium-mercury lithopone red, dark shade, bbls same Basis lb. 2.03 • —

Red light shade bbls. same basis lb. 1.80 • —
Red, medium shade bbls same basis lb. 1.95 • —
Red, medium light shade bbls same basis lb. 1.88 • —
Red, maroon shade bbls same basis lb. 2.11 • —

Cadmium-selenide lithopone maroon, bbls., frt alld E of Rockies lb 2.84 • —
Orange, bbls., same basis lb. 1.66 • —

Cadmium selenide lithopone red, orange-red shade bbls, same basis lb. 1.80 • —
Red dark shade bbls same basis lb. 2.64 • —
Red light shade bbls. same basis lb. 1.96 • —
Red, medium shade bbls. same basis lb. 2.31 • —
Red, medium-light shade bbls same basis lb. 2.08 • —

Cadmium-selenide lithopone yellow, all shades bbls frt alld E. of Rockies lb. 1.27 • —

Caffeine NF citrated dms 400-lb lots or more fob 2.70 • —

USP, syn., cryst., hydrous, dms., 100-lb. lots or more, frt. alld lb. 2.25 • —
hydrous, powd., 150-lb. dms., frt. alld lb. 2.25 • —

USP, syn., cryst., anhyd., powd., dms., 100-lb. lots or more, frt. alld lb. 2.40 • —

Cajuput oil, native cns lb 1.75 2.00
Redist USP cns lb 1.90 2.10
Calamine USP dms lb .34 —
Calamus oil bots lb 12.00 20.00

Calciferol cryst. 10-kilo or more lots works gram .54 —
1-10 kilo lots gram .55 —

Calciferol in edible oil (see Viosterol).

Calcium p-aminosalicylate trihydrate fib dms 100 lbs or more frt adjusted lb 3.10 • —

Calcium bromide NF jars 100 lbs. or more fob lb 1.10 • —

Calcium carbide standard generator size, 600-lb dms, c.l., dlvd ton.149.00 • —

Calcium carbonate, nat., dry grd., air floated, 325 mesh, bgs. c.l. works ton 10.50 —
Chalk, whiting, 325 mesh, bgs., c.l., works ton.32.00 -34.00
water-grd. ½ to 10 microns bgs., c.l., works ton.30.00 —
10 to 50 microns bgs. c.l. works ton 17.00 18.00
Precip., dense, bgs., c.l., works. ton.30.00 -38.50
bgs. l.c.l., works ton 45.00 53.50
medium bgs. c.l. works ton 38.00 —
bgs. l.c.l. works ton 48.00 -53.00
Surface treated, bgs., c.l., works. ton.42.00 -44.00
bgs., l.c.l., works ton.57.00 -59.00
ultrafine, bgs. c.l., works ton.137.50 167.50
bgs. l.c.l. works ton.137.50 187.50

Calcium chloride, cone., flake or pellet 94-97%, paper bgs., c.l., works, frt. equald. ton.39.30 • —
Flake, 77-80%, paper bgs., c.l., works, frt. equald ton.32.00 • —
Liquor, 40%, tanks, frt. equald. ton.12.50 • —
Powd., 77% min., paper bgs., c.l., works, frt. equald. ton.38.00 • —
Purif., gran., dms lb. .27 —
Solid, 73-75%, dms., c.l., frt. equald. ton.30.50 • —
dms., l.c.l. works, frt. equald. ton.36.00 -73.00
USP, gran., dms. lb. .32 • —
Calcium chromate, bgs., dlvd lb. .37 • —
Calcium cyclamate, 100-lb dms lb. 1.95 • —
Calcium gluconate, USP, AA grade, 100-lb dm., ton lb. 73½ —
USP powd. 100-lb dm. ton lb. .66½ —
Calcium hydride lump, dms. works. lb. 2.20 3.00
Calcium hypochlorite, high test, gran. 45-lb. cs., dlvd E. of Rockies cs.27.50 • —
100-lb. dms., same basis dm.39.50 • —
Calcium hypophosphite, dms. 1,000-lb. lots lb. 1.28 • —
Calcium iodide, 25-lb. jars, works. lb. 4.27 • —
Calcium lactate, NF, dms., f.o.b. works lb. .43 • .46
Calcium mandelate, USP, 150-lb. dm., works lb. 3.25 • —
Calcium naphthenate, liq. 4% Ca., dms., frt equald lb. .30 • —
Calcium pantothenate, USP, 1 kilo or more, kilo.20.00 • —
Calcium para-aminosalicylate (see Calcium p-aminosalicylate).
Calcium phenosulfonate, dms lb. 1.24 1.35
Calcium phosphate, dibasic, USP, dihydrate, bgs., c.l., frt. equald 100 lbs. 8.25 • —
Feed grade, 18½% P, bgs., c.l., t.l., Bonnie, Fla., frt. equald ton.81.00 • —
bgs. c.l. t.l., f.o.b. Texas City works ton 75.50 • —
Feed grade, 21% P., bgs., c.l., t.l., frt. equald ton.97.65 • —
bgs., l.c.l. frt equald ton.107.65 • —
Prices of calcium phosphate dibasic in bulk $3 per ton less than bgs., c.l., prices.
Calcium phosphate, monobasic, bgs., frt. equald 100 lbs. 7.45 • —
bgs., smaller lots same basis. 100 lbs. 7.95 • —
Tribasic, NF, precip., bgs., c.l., works, frt. equald 100 lbs. 9.25 • —
bgs. l.c.l. frt. equald 100 lbs.10.00 • —
Calcium propionate, any quantity, dms. dlvd E of Rockies. lb. .34½ —
Prices W. of Rockies 3c. per lb. more.
Calcium phytate bgs., 50 lbs. or more f.o.b. warehouse N.Y. lb. .39 • —
Calcium resinate, precip. dms., frt. alld., works lb. .45 • —
Calcium silicate hydrated, bgs., c.l., works lb. .06½ —
bgs., l.c.l., works lb. .07 • —
Calcium silicate paint grade (see Wollastonite)
Calcium stearate ctns., c.l. lb. .39 • —
ctns., l.c.l lb. .40 • .44
Calomel NF mild, powd. dms., 100-lbs., f.o.b. works lb 4.32 • —
NF mild, precip., dms., 100-lbs., f.o.b works lb. 5.67 • —
Camphene 46° m.p. dms incl., c.l., works lb. .15 • —
dms incl. l.c.l. same basis lb. .16½ —
tanks, same basis lb. .12½ —
Camphene, chlorinated 67-69% (see Toxaphene)
Camphor, monobromated, NF, dms., kgs lb. 3.63 3.70
Camphor, syn. tech. 1 bbl. or more. lb. .45 • —
USP, powd., bbls., 1,000-lb. lots lb. .56 • —
bbls., smaller lots lb. .57 • —
tablets, ctns., 1,000-lb. lots, lb. .80 • —
ctns., 500-lb. lots lb. .81 • —
ctns., smaller lots lb. .82 • —
Camphor oil, sassafrassy, dms. lb. .32 • .50
White, dms. lb. .24 • .40
Cananga oil, native, cns. lb. 5.00 6.50
Rectified cns lb. 7.25 -10.00
Candelilla wax, crude, bgs. lb. .57 • .59
Refd., pure, bgs. lb. .61 • .63
Powdered Candelilla wax 20 to 100 mesh, 8c higher.
Cantharides, Chinese, cs. lb. 1.50 • —
powd. bgs. lb. 1.75 • —
Russian bgs. lb. 2.25 • —
powd. bgs. lb. 2.50 • —
Caprie acid, dms lb. .27½ .29¾
tanks lb. .24¾ —
Caprolactam, monomer, flake, bgs., c.l., t.l., f.o.b. frt. equald. lb. .49 • —
bgs., l.c.l., t.l.l., same basis lb. .54 • —
molten, tanks, same basis lb. .46 • .462
Caprylic alcohol, 85% dms. c.l., t.l., works lb. .19 —
dms., t.l.l. same basis lb. .19½ —
tanks, frt. equald. lb. .16½ —
Sec. 92-99% dms. c.l. f.o.b. works lb. .22 • —
dms. l.c.l. t.o.b. works lb. .23 • —
tanks, f.o.b. works lb. .19½ —
Caprylic acid, dms lb. .27½ .29¾
tanks lb. .24¾ —
Capsicum (see Pepper red)
Capsicum oil (see Capsicum oleoresin).
Capsicum oleoresin NF from dom. pepper, dms lb. 4.00 • —
NF, from African pepper, dms. lb. 4.50 —
Caraway oil, NF, dms lb. 4.25 • 4.50
Caraway seed Danish bgs. lb. .16 —
Dutch, bgs. lb. .19 • —
Carbazole, 97%, bbls. ton lots, works lb. 1.05 • —
Carbon black, channel, rubber, beads, bulk, c.l. works lb. .08 • —
bgs., c.l., works lb. .08½ —
bgs., l.c.l., ex whse. or dlvd lb. .16¼ —
Furnace, fast extruding, bulk, c.l., works lb. .06¼ —
bgs., c.l., works lb. .06¾ —
bgs., l.c.l., ex whse lb. .13½ —
high abrasion, bulk, c.l., works lb. .07¼ —
bgs., c.l., works lb. .07¾ —
bgs., l.c.l., dlvd. or ex whse lb. .14½ —
high modulus, bulk, c.l., works lb. .05¾ —
bgs., c.l., works lb. .06¼ —
bgs., l.c.l., ex whse lb. .13 • —
semi-reinforcing, bulk, c.l., works lb. .05¼ —
bgs., c.l., works lb. .05¾ —
bgs., ctns., l.c.l. ex whse lb. .12½ —
pigment, high color beads, bgs., c.l., works lb. .78 • —
ctns., l.c.l., dlvd. or ex whse lb. .87 • —
medium color, uncompressed, bgs., c.l., works lb. .14 • —
bgs., l.c.l., dlvd. or whse. lb. .22½ —

Carbon dioxide, indust., wholesale, bulk, 30,000-2,999,999 lbs., dlvd. Metropolitan areas, E ton.60.00 -115.00
bulk, 3,000,000 lbs. or more, dlvd Metropolitan areas, E ton.55.00 • —
Solid, bulk, wholesale, works ton.85.00 • —

Carbon disulfide, 55-gal. dms., c.l., works, frt. equald to competitive points lb. .071 • —
55-gal. dms., l.c.l., same basis lb. .086 • .091
5-gal. dms., 30 dms. to c.l., same basis lb. .131 • —
5-gal. dms., less than 30 dms., same basis lb. .161 • —
tanks, f.o.b. works lb. .0450 —

Carbon tetrachloride, CP, consumers dms., c.l., frt. alld. lb. .12¾ —
dms., l.c.l., frt. alld. lb. .15¼ —
Tech. consumers dms. c.l., t.l., frt. alld lb. .11¾ —
dms. l.c.l. t.l.l. frt. alld lb. .14¼ —
tanks, frt. alld lb. .10¾ .11¼

Carboxymethyl cellulose (see CMC).

Carbromal NF dms. 100-lb lots, works lb 4.00 4.25
dms. smaller lots, works lb 4.10 4.75

Cardamom oil, NF, bots lb.40.00 -43.00

Cardamom seed, bleached "A" lb. 3.15 • —
Bleached "B" lb. 3.00 • —
Decorticated Alleppey, cs. lb. 2.60 • —
Guatemala, cs. lb. 2.45 • —
Green, Alleppey, bgs. lb. 1.95 • —
Ceylon, bgs. lb. 2.00 • —

Carmine No. 40, NF, bulk, 100-lb lots or more, dlvd. lb.16.80 —
bulk, smaller lots, dlvd. lb.16.90 -17.30

Carnauba wax, chalky, bgs., ton lots. lb. .56 • .58
North Country, No. 2, crude, bgs., ton lots lb. .64 • .65
refd., pure, ton lots lb. .72 • .74
North Country, No. 3, Ceara, crude, ton lots lb. .55 • .57
North Country, No. 3, Parnahyba, crude, ton lots lb. .57 • .59
No. 3, refd., pure, bgs., ton lots. lb. .64 • .66
No. 1, Ceara, yellow, bgs., ton lots. lb. .88 • .90
Parnahyba, yellow, bgs., ton lots, lb. .90 • .92
Powdered carnauba wax, 20 to 100 mesh 8c. per lb. higher

Carotene tech. 1,350,000 A units per gram tins, 5-10 kilo lots, dlvd gram. .20½ —
in carrot oil, 5,000,000 to 8,000,000 A units per lb. dms., works million units. .12 —
USP, microcrystalline in oil, 400,000 A units per gram, dms. dlvd million units. .144 —
b-Carotene in vegetable oil, semi-solid suspension 400,000 A units per gram cns kilo 57.60 • —
b-Carotene, liquid in vegetable oil, 500,000 A units per gram, cns kilo.72.00 • —
b-Carotene, pure, cryst., 1,600,000 to 1,670,000 A units per gram, cns kilo240.00 • —

Carvol, bots. lb. 5.00 5.40

Cascara sagrada bark, bulk lb. .32 —

Casein, dom. edible, acid precip., 30 mesh, bgs., 10,000-lb. lots or more works lb. .56 • —
80 mesh, bgs., 10,000-lb. lots or more, works lb. .64 • —
Imp., inedible, acid-precip., grd., Argentine, bgs., c.l., ex-dock, Eastern seaport lb. .19 - .19¾
Australian, bgs., c.l., same basis lb. .21 • —
New Zealand, same basis lb. .24 • .25
Cashewnut shell liquid, treated, dms. c.l., Newark, N.J lb. 24 • —
dms. ton lots same basis lb. 25 • —
t.w., same basis lb. 22½ —

Cassella acid, dms. frt alld., 100% basis lb 1.44 1.75

Cassia oil, redist., USP, cns lb. 6.50 8.00

Cassia, Padang, "A," bls. lb. .28½ —
"B," bls. lb. .27½ —
"C," bls. lb. .25½ —
Korintje "A," bls. lb. .27½ —
"B," bls. lb. .26½ —
"C," bls. lb. .25¼ —

Castor oil, dom., blown, dms., c.l. lb. .2550 —
dms. l.c.l. lb. .2650 —
dehydrated, bodied, dms., c.l. lb. .2710 —
dms., l.c.l. lb. .2860 —
tanks lb. .2510 —
dehydrated, unbodied, dms., c.l., lb. .2560 —
dms., l.c.l. lb. .2660 —
tanks lb. .2360 —
hydrogenated, bgs., c.l. lb. .2425 —
bgs., ton lots lb. .2625 —
bgs., l.c.l., dlvd lb. .3025 —
raw, No. 1, dms., c.l. lb. .2260 —
dms. l.c.l lb. .2300 —
tanks lb. .2000 —
No. 3, tech., dms., c.l. lb. .2125 —
dms., c.l., lb. .2225 —
tanks lb. .1925 —
refd., decol., dms., c.l. lb. .2350 —
dms. l.c.l. lb. .2750 —
tanks lb. .2450 —
USP, dms., c.l. lb. .2350 —
dms., l.c.l lb. .2450 —
tanks lb. .2150 —

Castor oil, imported, No. 1, Braz., tanks, New York lb. .16 - .16¼
No. 3, tanks, same basis lb. .15¾ - .16
Sulfonated, 50% dms., works lb. .15 - .15½
75% dms. works lb. .19 - .19½

Castor oil acids, dehydrated, dms. lb. .41¼ .43¼
Split, dms. lb. .33¾ .34¾

Castor pomace, bgs., c.l., works ton.35.00 • —

Castoreum nat., cns. lb 5.25 • —
Syn., cns lb 9.00 • —

Catechol, CP, cryst., fib., dms., works lb 2.17½ —
Resub., dms. works lb 4.29½ —

Catnip leaves, Southern, bls lb. Nominal.

Caustic potash (see Potash caustic).

Caustic soda (see Soda, caustic).

Cedarleaf oil, USP XIII cns., dms. lb. 3.30 - 3.50

Cedarwood oil, cns., dms. lb. 1.10 - 1.25

Celery seed oil lb.12.00 • —

Celery seed, French, bgs. lb. .34 • —
Indian, bgs. lb. .26 • —

Cellulose acetate, flake, powd., bgs., t.l., dlvd E lb. .36 .51

Cellulose acetate-butyrate, powd., 17% butyryl content, bgs., dlvd E lb. .545 .555
27% butyryl content, bgs. dlvd. E lb. .595 .605
38% butyryl content, bgs., dlvd. E lb. .545 - .555
38% butyryl content, half-second, bgs., dlvd. E. lb. .545 - .555
50% butyryl content, bgs. dlvd. E lb. .585 .595

Cellulose gum methyl (see Methyl Cellulose).

Cellulose gum, pure, high vis., bgs., 23,000-lb. lots or more works, frt. alld	lb.	.57
bgs., smaller lots, same basis	lb.	.59
standard, low or medium vis., bgs., c.l., t.l., frt. alld. E	lb.	.57
bgs., ton lots, frt. alld. E	lb.	.59
(Cellulose gum prices 1c. per lb. higher in west.)		
Cerium hydrate 74% CeO, fib. dms., 100-lb. lots or more	lb.	1.40
77% CeO, fib. dms., 100-lb. lots or more	lb.	1.74
Cerium oxalate (see Rare earth oxalate).		
Cerium oxide, optical grade, bgs., 50-lb. lots or more, dlvd.	lb.	1.85 - 1.90
bgs., smaller lots, dlvd.	lb.	2.15
Cetyl alcohol, NF, fib. cns., c.l., t.l., dlvd. E	lb.	.41½-
fib. cns., l.c.l., same basis	lb.	.43½-
tanks, same basis	lb.	.39
Extra, cns., c.l., t.l., dlvd. E	lb.	.48½-
fib. cns., l.c.l., same basis	lb.	.50½-
tanks, same basis	lb.	.46
Chalk (see Calcium carbonate).		
Chamomile flowers, Hungarian,	lb.	.93 - 1.10
Roman, cs.	lb.	1.75 - 2.00
Chamomile oil, blue Hungarian, bots	lb.	350.00
Charcoal, activated, NF, fib. dms., c.l., works	lb.	.34
fib. dms., 5-ton lots, works	lb.	.35
fib. dms., smaller lots, works	lb.	.36 - .59
Charcoal, black (see Charcoal, activated).		
Charcoal, bone (see Bone black).		
Charcoal, hardwood, lump, bulk, c.l., f.o.b. plant	ton.	55.00
briquets, bulk, c.l., f.o.b. plant	ton.	80.00
5-lb. paper bgs., c.l., same basis	ton.	106.00
20-lb. paper bgs., c.l., f.o.b. plant, ton		90.00
40-lb. paper bgs. c.l., same basis	ton.	86.00
Chenopodium oil, NF, cns	lb.	4.70 - 4.90
Chicago acid, paste, bbls., frt. alld.	lb.	3.21
Chinawood oil (see Tung oil).		
Chloral, tech., 94% min., dms., c.l., works	lb.	.23
dms., l.c.l., works	lb.	.24
tanks, multiple units, 5 cars, dms., l.c.l., works	lb.	.21
Chloral hydrate, USP, jars, 1,000-lb. lots	lb.	1.00
jars, 500-lb. lots	lb.	1.03
jars, 100-lb. lots or less	lb.	1.05
Chlordan, agricultural, dms., c.l., frt. alld	lb.	.65
dms., t.c.l., 5,000-10,000-lb. lots, frt alld	lb.	.66
clarified, dms., c.l., frt. alld	lb.	.69
dms., t.c.l., 5,000-10,000-lb. lots, frt. alld	lb.	.70
Chlorinated paraffin, 40%, dms., c.l., frt. alld	lb.	.15
dms., t.c.l., 10 dms. or more, same basis	lb.	.16
70%, dms., c.l., same basis	lb.	.18½-
dms., t.c.l., 10 dms. or more, same basis	lb.	.19½-
Chlorinated rubber, 5, 10, 20 cps., ctns., c.l. works	lb.	.60
ctns., l.c.l., works	lb.	.61
125 cps., ctns., c.l., works	lb.	.70
300 cps., ctns., c.l., works	lb.	.80
Chlorine, liq., cyls., c.l., works, frt. equald	lb.	.11
cyls., l.c.l., Metropolitan area, same basis	lb.	.12½- .13¾
tanks, single units, works, frt. equald 100 lbs.		3.25
tanks, multiple units, 5 cars, works, frt. equald, same basis 100 lbs.		4.15
tanks, multiple units, 4 cars, same basis 100 lbs.		4.35
tanks, multiple units, 2 cars, same basis 100 lbs.		5.35 - 5.85
tanks, multiple units, 1 car, same basis 100 lbs.		6.25 - 7.25
Chloroacetic acid, mono, flake, 99%, purif. dms. c.l	lb.	.23½- .25½
dms. l.c.l	lb.	.24½-
Tech., flake, 96-97%, dms., c.l., frt. equald	lb.	.19
dms., t.c.l. frt equald	lb.	.20
2-Chloro-4-aminotoluene, tech., liq., dms., frt alld	lb.	1.03
4-Chloro-2-aminotoluene, fused, bbls.	lb.	1.38
6-Chloro-2-aminotoluene, tech., liq., dms. frt. alld	lb.	.66
m-Chloroaniline, dms. c.l., frt. alld.	lb.	.75
dms., t.c.l., same basis	lb.	.77
tanks, same basis	lb.	.73
o-Chloroaniline, dms., c.l., frt. alld.	lb.	.52
dms., t.c.l., same basis	lb.	.54
tanks, same basis	lb.	.50
p-Chloroaniline, dms., c.l., frt alld	lb.	.77
dms., t.c.l., same basis	lb.	.79
o-Chlorobenzaldehyde, dms., t.l. works	lb.	1.05
dms., t.t.l., same basis	lb.	1.20
p-Chlorobenzaldehyde, dms., t.c.l. works	lb.	1.95
o-Chlorobenzoic acid, fib dms., t.l. works	lb.	1.10
fib dms., smaller lots works	lb.	1.25
p-Chlorobenzoic acid, fib dms., 2,000-lbs or more works	lb.	2.25
fib. dms., less than 2,000-lbs., same basis	lb.	2.30
Chloroform, tech., dms. c.l. dlvd. E	lb.	.18
dms., t.c.l., same basis	lb.	.19
tanks, same basis	lb.	.17
USP, dms., c.l., dlvd	lb.	.27
dms., t.c.l., dlvd	lb.	.30
tanks, minimum 4,000 gals. dlvd.	lb.	.25
2-Chloro-4-nitroaniline, paste, dlvd. E., 100% basis	lb.	.90
Powd., dlvd. E., 100% basis	lb.	1.00
4-Chloro-2-nitroaniline, powd. dlvd. E	lb.	.88
4-Chloro-2-nitrophenol, tech., paste, dms. frt. alld	lb.	.75
4-Chloro-2-nitrotoluene, tech., solid, dms., frt. alld	lb.	.99
o-Chloro-2-nitrotoluene, tech., solid, dms., frt. alld	lb.	.25

Interested personal service—always—when you buy from Eastman...

Acids and Anhydrides

acetic acid
Organic synthesis
Reaction medium and solvent
Dyeing assistant

acetic anhydride
Acetylating agent
Dehydrating agent in nitration and sulfonation reactions, etc.

propionic acid
Ca or Na salt used as bread mold inhibitor

propionic anhydride
Acylating agent
Intermediate

n-butyric acid
For the preparation of butyric esters useful in formulating perfumes and flavorings

n-butyric anhydride
Acylating agent
Intermediate

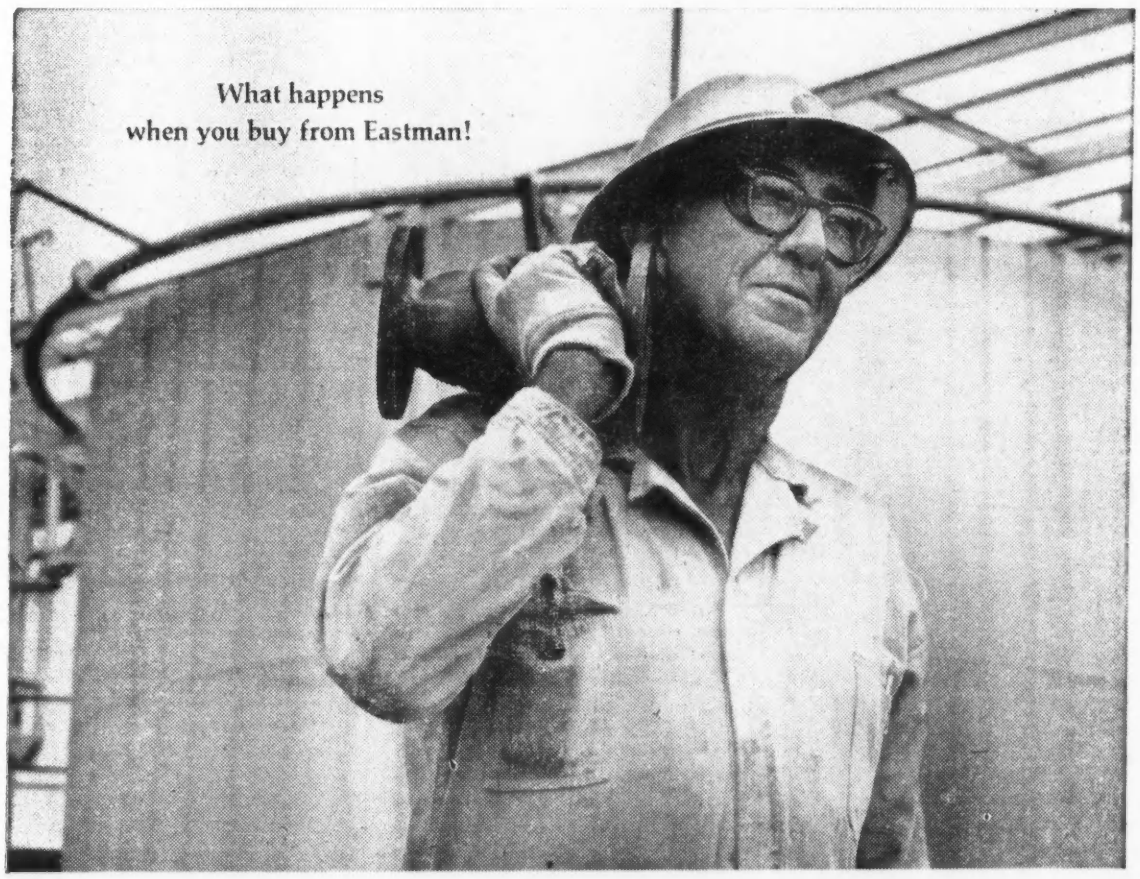
isobutyric acid
As a starting point for the synthesis of plasticizers, perfume materials and lacquer solvents

isobutyric anhydride
For the preparation of aromatic esters for perfumes

2-ethyl hexoic acid
Pb, Mn and Co salts are used as oil paint driers; Zn and Na salts as emulsifying and dispersing agents

crotonic acid
A versatile and reactive intermediate

For properties and shipping information on these and other Eastman products, see **Chemical Materials Catalog**, page 225 or **Chemical Week Buyers' Guide**, page 113.



The case of the culprit catalyst

"The phone was ringing when I walked into the office on that Monday morning," mused one of our regional sales managers.

"The customer's greeting was rather cheerful considering the circumstances he then proceeded to relate.

"In his own words it went something like this: 'We have a new process technique out here, but we're not overly proud of it. We're making aluminum acetate...using as reactants *your glacial acetic acid* and one of our new aluminum storage tanks.'

"I was glad he still had a sense of humor but wished that I had taken the day's vacation, which was briefly considered late Sunday.

"Well, he went on to relate that their yields on a process (not the new one he had just mentioned) in which our acetic acid was one of the reactants had dropped off alarmingly. While checking out process controls and materials they found aluminum acetate in the acetic acid storage tank.

"Under the circumstances his conclusion that our acid contained a catalyst for the unwanted reaction seemed even to me a reasonable hypothesis.

"Arrangements were made to send a large sample to our Acid Division Control Laboratories for complete analysis, and I held my breath several days until the final report came in.

"A metal catalyst was present, but one that for a number of good reasons we avoid like the plague. Armed with the information that it was extremely unlikely that contamination occurred prior to unloading, we dispatched a technical service man to the customer's plant to help find out where it was coming from.

"And with the aid of an improperly functioning check valve, he did. Seems that the acetic acid storage tank was connected directly to a reactor in which the metal catalyst was (as it should have been) present in salt form. Trace amounts were reaching the storage tank...and you know the rest.

"Fortunately, tank damage was not extensive, and by filtering, they were able to make use of the acid containing the aluminum acetate. After cleaning out the tank it was filled back up... with a new supply of our pure glacial acetic acid.

"Oh yes, a brand new check valve was installed, too."

The normal way we keep our customers happy? If necessary, yes. But more an example of the interested personal service you get when you buy from Eastman.

Eastman CHEMICAL PRODUCTS, INC., KINGSPORT, TENNESSEE, Subsidiary of Eastman Kodak Company

SALES OFFICES: Eastman Chemical Products, Inc., Kingsport, Tennessee; Atlanta; Boston; Buffalo; Chicago; Cincinnati; Cleveland; Detroit; Greensboro, North Carolina; Houston; Kansas City, Missouri; New York City; Philadelphia; St. Louis.
West Coast: Wilson & Geo. Meyer & Company, San Francisco; Los Angeles; Portland; Salt Lake City; Seattle.

o-Chlorophenol, dms., c.l., frt. equald lb. .37 - —
dms., t.c.l., same basis lb. .38 - —
p-Chlorophenol, dms., c.l., frt. equald lb. .37 - —
dms. t.c.l., same basis lb. .38 - —
Chloropicrin, coml., cyls., 180 lbs., frt alld lb 1.07 - —
cyls., 100 lbs., same basis lb 1.08 - —
cyls., 50 lbs., same basis lb. 1.14 - —
Chlorosulfonic acid, dms., c.l., frt. equald lb. .0465- —
dms., t.c.l. frt. equald lb. .0515- —
tanks frt equald lb. .0415- —
Chlorosulfonic acid, in stainless steel dms ½c. per lb higher
o-Chlorotoluene, tech. dms., t.l., works lb. .37 - —
dms. t.c.l., t.t.l. same basis lb. .38 - —
Choline bitartrate, 100-lb. dms., frt. equald lb. 1.25 - —
Choline chloride, 100-lb dms., frt. equald lb. 1.25 - —
Choline dihydrogen citrate, 100-lb. dms. frt. equald lb. 1.25 - —
Chrome green CP dark, light medium blue content, 1-15%, bbls dlvd E of Rockies, lb. .43 - —
blue content 16-30%, bbls., same basis lb. .44 - —
41-45% bbls., same basis, lb. .44 - —
blue content 45-49%, bbls., same basis lb. .45 - —
reduced color 25%, bbls., same basis lb. .20 - —
Chrome green prices 1c higher W of Rockies
Chrome orange CP bbls. dlvd E of Rockies lb. .35 - —
Chrome orange prices 1c higher W of Rockies
Chrome yellow CP bbls. dlvd E. of Rockies lb. .35 - —
Chrome yellow price 1c. higher W of Rockies
Chromic acid, 99¾%, dms., c.l., works frt. equald lb. .29½- —
dms. t.c.l. dlvd N Y Metropolitan area lb. .30 .31
Chromic acid NF (see Chromium trioxide)
Chromium acetate, soln., 7½%, dms., 500-2,000-lb lots, works, lb. .10 —
Chromium fluoride bbls. works lb. .51 .52
Chromium oxide, hydrated, bbls., fib dms. c.l. frt alld. lb 1.20
Pure bgs., c.l., frt alld lb 44½ —
bgs. t.c.l. same basis lb. 45¼- —
Chromium trioxide NF bots lb 1.15 —
Cinchona bark, NF red broken, hgs lb .25 —
NF yellow broken bgs lb. .35 .40
Cinnamic acid, refd. bots lb 2.50 3.50
Cinnamic alcohol bots lb 1.50 1.60
Cinnamic aldehyde, dms lb .80 1.00
Cinnamon, Ceylon, No. 2, bgs. lb. .55 —
Ceylon, No. "0000," bgs lb. .64 —
Cinnamon bark oil, bots lb. 55.00 -74.00
Cinnamon leaf oil, crude, dms lb 1.60 2.00
USP (Cassia), cns., dms lb 8.50 13.50
Citral, CP, bots lb. 4.65 5.55
Extra, bots lb. 5.00 7.25
Syn., dms. lb. 6.10 6.65
Citric acid, USP anhyd., fine gran., bgs., dms., c.l. lb. .29½ .30
bgs. dms. 10,000-lb lots, l shipt lb. .30 .30½
bgs. dms. smaller lots lb. .30½ .31
USP, hydrous, fine gran., bgs., dms., c.l. lb. .27½- .28½
bgs. dms. 10,000-lb lots, l shipt lb. .28 .28½
bgs. dms. smaller lots lb. .29 .29½
Powdered citric acid ½c per lb higher
Citronella oil, Ceylon, dms. lb. 1.05 —
Formosan, dms. lb. 1.15 - —
Citronellol, bots dms. lb 1.90 2.50
Synthetic, dms. lb. 1.70 —
Civet, artif., bots lb. 13.75 15.00
Nat bots oz 8.50 15.00
Clay, hall, dom., airfloated, bgs., c.l. Tenn ton. 17.50 21.50
crushed, shed moisture bulk, c.l., Tenn ton 8.00 11.25
tmp airfloated bgs. c.l. Atl port net-ton 43.00 47.00
lump bulk, Atl port net-ton 31.50 37.50
Clay, China, dom., dry grd air floated, 99% 325 mesh, Georgia bgs. c.l., works ton 11.00 17.60
Georgia bgs. t.c.l. works ton 13.50 22.50
Imp., white, lump, bulk, c.l., ex-dock, Philadelphia, Portland, Me long-ton 23.00 35.00
white powd. bgs. c.l. ex dock net-ton 50.00 —
bgs. t.c.l. ex whse net-ton 60.00 70.00
Cleaner's naphtha, petroleum, 105°F Flash, tankcars, New Jersey and New York gal. 18 —
Group 3 gal. 12.75 —
Houston, Texas gal. 145 —
140 F Flash, tankcars, New Jersey or New York gal. .205 —
Group 3 gal. 154 —
Houston, Texas gal. 17 —
Cleve's acid, tech., mixed, solid, dms., frt alld lb 1.05 —
1.6 tech., solid, dms frt alld lb 77 —
1.7 tech., dms frt alld. lb 2.42 - —
Clove bud oil, USP, dms. lb. 2.55 - —
Cloves, Madagascar, bgs lb. .36 - —
Zanzibar, bgs. lb. .39 - —
Clove leaf oil, crude, dms lb 1.10 - —
CMC, crude, 96.4% low or medium vis, bgs., 23,000 lbs., dlvd, E., 100% basis lb. .40 - —
96.4% low or medium vis. bgs., less than 23,000 lbs., dlvd, E., 100% basis lb. .42 .46
65% low or medium vis. bgs., c.l., dlvd E 100% basis lb .40 —
t.c.l., dlvd E., 100% basis lb .42 1.00
CMC, purif., high vis. (see Cellulose gum)
CMC prices W of the Rockies are ½c. per lb higher and are on a dlvd basis.
Coal tar, crude, resale to soln., tanks, works gal. .17 —
Refd., resale, indust., dms. c.l., ex whse gal. .35 —
dms. t.c.l. ex whse gal. .39 —
tanks, works gal. 20½- —
Coaltar pitch, aluminum, bulk, Works ton 42.00 —
Carbon, bulk, works ton 42.00 —
Indust., bulk, works ton 44.00 —
Coke, bulk, works ton 40.50 —
Fiber, bulk, works ton 48.00 —
Roofing, 140-155 F, Federal Specification RR-P-71, Type I, tanks, works ton 41.00 —
Cobalt acetate, 23% Co., dms., dlvd lb 1.04 —
Cobalt blue, genuine, 250 lb. bbls., dlvd. E of Rockies lb. 4.90 - —
Cobalt blue prices 1c. higher W. of Rockies
Cobalt blue, imitation (see Ultramarine blue).
Cobalt carbonate, 68% Co., powd., bgs., dlvd lb. 1.45 - —
Cobalt chloride, 24.2% Co., dms., dlvd lb. .93 - —
Cobalt hydrate, 60-61% Co., dms., dlvd lb. 1.97 - —
Cobalt linoleate, fused 8½% Co., dms lb. .71½- —
Liq., 6% Co., dms lb. .44 - —
Cobalt metal, 99% dms., f.o.b. carrier lb. 1.50 - —
Cobalt naphthenate liq. 6% Co., dms., dlvd lb. .48¾- —
Cobalt nitrate 20.1% Co. bbls. dlvd. lb. .75 - —
Cobalt oxide, black, ceramic grade, 72½-73½% Co., kgs., dlvd E of Mississippi R. lb. 1.15 - —
70-71% Co kgs. same basis lb 1.12 —
Cobalt oxide prices W of Mississippi R. 3c. per pound higher
Cobalt phosphate powd., 32.1% Co., dms., dlvd lb. 1.35 —
Cobalt resinate, fused, 3% Co. dms lb. .38½- —
Cobalt sulfate, cryst., 21% Co., dms., dlvd lb. .64 - —
Monohydrated, 33% Co., dms., dlvd lb. 1.09 - —
Cobalt tallate 6% Co. dms. dlvd. lb .44 - —
Cocaine, USP cns., 100-oz. lots, f.o.b. works oz. 17.50 - —
Cocaine hydrochloride, cns 100-oz lots f.o.b works oz. 13.75 - —
Cocillana bark, bls. lb. 20 - .22
Cocoa butter, bgs. lb. .62 - .67
Coconut oil, crude, tanks, New York lb. .12¼- —
tanks, Pac. coast lb. .11¼- —
refined, deod., dms lb. .18 - .19
Coconut acid, oil, dist. dms lb. .21½- .24
tanks lb. .19 - —
double dist. (stripped), dms. lb. 22½- .25
tanks lb. .20 - —
Cod oil, dms., spot lb. 08½- .08⅝
Codeine, NF cns. 100-oz lots oz. 13.25 - —
Codeine hydrochloride cns 100-oz. lots oz. 11.75 - —
Codeine phosphate USP cns 100-oz lots oz. 10.25 - —
Codeine sulfate USP cns 100-oz lots oz. 10.75 - —
Codliver oil, USP dms gal 1.40 1.70
Cohosh root, black, bls lb 20 25
Blue, bls lb 20 25
Colchicine, USP, bots. oz. 27.50 29.00
Colchicum root, bls lb .35 45
Colchicum seed, bgs. lb. .85 .90
Collodion, USP, dms. lb. .32½- —
USP flexible, dms lb. .34 - —
Colocynth pulp, bls lb 75 —
Colombo root, bls lb 16 .18
Condurango bark, bls lb 18 .20
Congo copal gum, No. 1, bgs lb. .26 - .27
No. 2, bgs. lb. .30 - .35
No. 3, bgs. lb. .22 - .25
Copaiba balsam, cns., dms lb. .85 - .95
Copaiba oil, cns lb 1.35 2.00
Copper acetate, bbls., c.l., works lb .53 —
bbls. t.c.l. works lb .54 —
Copper carbonate, 55%, dark dense, c.l., works lb. .3545- —
bgs., t.c.l., works lb. .3695- —
Copper chloride, cupric, anhyd., dms., works lb. .44½- .45
cryst., dihydrate, dms., works lb. .30¾- .31¼
cryst., dried, dms., works lb. .38¾- .39¼
cuprous, dms., works lb. .3995- .4295
Copper cyanide, tech., dms 20,000-lb lots or more lb .609 —
dms, 1,000-lb lots or more lb .619 —
dms, smaller lots lb .639 .65
Copper gluconate, dms lb 3.20 —
Copper hydrate, dry, dms, c.l., frt, E of Miss lb. .52½- —
dms., t.c.l., same basis lb. .53 - —
Copper metal, electrolytic, dlvd, Valley, basis lb. .31 - —
Copper naphthenate, liq., 8% Cu, dms, frt alld lb. .26½- —
Copper nitrate, tech, cryst, dms., works lb. .30¾ .32¾
Copper oleate, solid, 8% Cu, dms., works lb .45 —
Copper oxide, black, bbls., 100-5,000-lb. lots, works lb. .47 - —
red., 97%, USN Type I, bbls., 100-5,000 lbs. lots lb. .47½- —
90% USN Type II, bbls., 100-5,000-lb lots or more, works lb. .45½- —
Copper quinolinolate, 18% Cu, dms., ton lots lb 4.25 —
10% active quinolinolate, dms lb 1.14 1.15
Copper resinate, precip., dms, frt alld lb. .47 - —
Copper sulfate, CP, gran., dms., works lb. .1885- —
Cryst., 99%, bgs., c.l. works 100 lbs. 12.50 - —
bgs., t.c.l., works 100 lbs. 13.00 -15.50
Monohydrated, 35%, dms., c.l., works 100 lbs. 23.35 - —
dms., t.c.l., works 100 lbs. 24.10 - —
Tribasic, distributors, 50-lb c.l., works 100 lbs. 28.60 - —
bgs., t.c.l., works 100 lbs. 30.10 - —
Copper undecylenate, dms lb 4.45 —
Copra, Atl., Gulf ports ton. 160.00 - —
Pac. coast, c.i.f ton. 157.00 - —
Coriander oil, USP, bots. lb. 5.75 - 6.25
Coriander seed, Moroccan, bgs. lb. .19 —
Rumanian, bgs. lb. .17 - —
Yugoslavian, bgs lb 08½ - —
Corn oil, crude, tanks, works lb. .25½- —
Foots, (soapstock, 95% acid), tanks, New York lb. .05¾- —
Refd., salad, dms. lb. .3073- .31
tanks lb. .2873- —
Corn oil, acid, dms lb. .16 .18½
tanks lb. .13½- —
Corn sugar, tanners chipped, paper bgs. c.l. 60,000 lbs min. 100 lbs 7.30 —
paper bgs. t.c.l. 100 lbs 7.45 —
Corn syrup, 43° Be., tanks, dlvd N Y 100 lbs. 6.15 - —
non-ret dms. c.l. same basis 100 lbs. 7.23 - —
Corrosive sublimate (see Mercuric chloride)
Cortisone acetate, USP bots, kilo or more gram. 85 .90
Costus oil, bots oz 6.00 —
Cottonseed meal, 41% bgs. Memphis ton. 63.00 -64.00
Cottonseed oil, crude, tanks, South, East lb. .12½- Nom.
tanks, Valley lb. .12⅜- Nom.
tanks, Tex., Waco lb. .12¼- Nom.
Foots (soapstock, acid 95%), New York, tanks lb. .04¼ —
Refd., salad, dms. lb. .17⅞- .18¼
tanks lb. .15⅞- —
Cottonseed oil acids, dist., dms. lb. .16 - .18½
tanks lb. .13½- —
Coumarin, NF, cryst., dms. lb. 3.20 - 3.30
Cramp bark, NF, bls. lb. .90 - 1.00
Cream of tartar (see Potassium bitartrate).
Creosote carbonate, NF bots. cbys., lb. 3.05 3.26
Creosote, coaltar, crude, tanks, works, frt. adjusted gal. .24 - —
Crude, soln 80%, tanks, works, gal. .226 - —
Refd., dms., c.l., works gal. .50 - —
dms., t.c.l., same basis gal. .62 - —
tanks, same basis gal. .38 - —
West Coast creosote prices computed on a basis of 24c. per gallon for straight oil and 20c per gallon for coaltar
Creosote, beechwood, chys., dms., f.o.b. works, dlvd. in Metropolitan area lb. 1.72 - 1.77
Hardwood, NF chys. dms. same basis lb. 1.42 1.47
Pinewood, dms. incl. c.l., works, lb. .0611- —
dms. incl., t.c.l., works lb. .0684- —
dms. incl., t.c.l. ex whse, New York lb. .0795- —
tanks, works lb. .0511- —
Creosote oil (see Creosote coaltar).
Cresol, tech. 50% below 204°C., dry above 207°C., wide distillation range non-ret. dms., c.l. frt. alld lb. .16½- —
non-ret dms. t.c.l. same basis lb. .17½- —
tanks same basis lb. .145 - —
USP, 50% 204°C., dry above 207°C., wide distillation range, non-ret. dms., c.l., same basis lb. .18 - —
non-ret dms. t.c.l. same basis, lb. .19 - —
tanks, same basis lb. .16 - —
m-Cresol, 95-98% dms. c.l., works, lb. .60 - —
dms., t.c.l. works lb. .61 - —
m-p-Cresol, 5-95% 3°C., dms., c.l., frt. equald lb. .18 - —
dms., t.c.l., same basis lb. .19 - —
tanks, same basis lb. .16 - —
2.97% 2°C. dms. c.l. frt. equald. lb. .22 - —
dms., t.c.l., same basis lb. .23 - —
tanks same basis lb. .20 - —
o-Cresol, 30.5°C. m.p. and over, ret., dms c.l. frt equald lb. .17 - —
ret. dms., t.c.l., same basis lb. .18 - —
tanks, same basis lb. .15 - —
30°-30.49°C. m.p. dms. c.l., frt. equald lb. .16½- —
ret. dms., t.c.l., same basis lb. .17½- —
tanks same basis lb. .14½- —
29°-29.9°C, m.p., dms., c.l., frt. equald lb. .16 - —
ret. dms., t.c.l., same basis lb. .17 - —
tanks, same basis lb. .14 - —
25°-28°C. m.p. dms. c.l., frt. equald lb. .15 - —
ret. dms. t.c.l. same basis lb. .16 - —
tanks, same basis lb. .13 - —
p-Cresol, 98%, dms., c.l., f.o.b., frt. alld. lb. .50 - —
dms., t.c.l., same basis lb. .52 - —
tanks, same basis lb. .45 - —
p-Cresyl methyl ether, cns lb. 1.80 - 2.05
Cresylic acid, coaltar, dom., meta-para content above 25%, resins and tricresyl phosphate grades dms., c.l., t.l. frt equald gal. 1.35 - —
dms., t.c.l., same basis gal. 1.40 - —
tanks, same basis gal. 1.15 - —
metapara content 25% or less, dms., c.l., t.l. same basis gal. 1.20 - —
dms., t.c.l., same basis gal. 1.25 - —
tanks, frt. equald gal. 1.00 - —
Imp., metapara content 25% or less, f.o.b. works, frt. equald to competitive points, c.l. gal. 1.15 - —
t.c.l., f.o.b., works gal. 1.20 - —
tanks, same basis gal. 1.00 - —
Crotonaldehyde, 91-93% dms., t.c.l. works lb. .25 - —
Crotonic acid, 200-lb. dms., c.l., dlvd lb. .49 - —
dms., t.c.l., dlvd lb. .51 - —
Cryolite, nat., indust., bgs., c.l., works 100 lbs. 13.00 - —
bgs. t.c.l. works 100 lbs. 14.25 - —
Cubeb oil, cns lb. 8.50 - 8.75
Cube root, powd., 5% rotenone, bgs., t.l., works lb. .21 - —
bgs. t.t.l. works lb .22 - —
Cubeb berries, NF, bgs. lb. 1.30 - —
Powd., cs. lb. 1.45 - —
Cumene, dms. c.l., works lb. .12 - —
dms., t.c.l., works lb. .14 - —
tanks, works lb. .11 - —
Cumin seed, Iranian, bgs. lb. .17 - —
Turkish, bgs. lb. .16½- —
Cumin seed oil, bots. cns lb. 15.50 -17.00
Cyanamide fertilizer, mixing grade, 21% N, gran. bgs., Niagara Falls, Ont. contract, ton. 57.00 - —
pulv., 21% N bgs., works, unit-ton. 2.85 - —
Cyanamide, indust. grade, bgs., c.l., works ton. 75.00 - —
bgs., t.c.l., works ton. 96.00 - —
Indust grade 6-16 mesh, dms., c.l. works ton. 120.00 - —
dms. t.c.l., works ton. 140.00 - —
Cyclohexane, 99%, tech., dms., c.l., dlvd E of Rockies gal. 1.02 - —
dms. t.c.l. same basis gal. 1.10 - —
dms. c.l. dlvd W of Rockies gal. .77 - —
dms., t.c.l., same basis gal. .85 - —
tanks, works gal. .55 - —
98% tech 40-dm lots or more, f.o.b works gal. .56 - —
5-39 dms. same basis gal. .60 - —
tanks, same basis gal. .36 - —
Cyclohexanol, tech., dms., c.l., works, frt. alld, E lb. .30½- —
dms. t.c.l. works, same basis, lb. .31½- —
tanks, works, same basis lb. .28 - —
Cyclohexanone, tech., dms., c.l., works lb. .33½- —
dms., t.c.l. works lb. .34½- —
tanks, works lb. .31 - —
Cyclohexylamine, tech., dms., c.l., works lb. .49 - —
dms. t.c.l. works lb. .50 - —
tanks, works lb. 47 - —
Cypress oil, bots. lb. 5.30 - —

D

2,4-D, tech., bgs. dms., c.l., works, frt equald lb. .40 - —
bgs dms. t.c.l. same basis lb. .45 - .49
2,4-D butyl ester, dms. c.l., works, lb. .43 - —
dms., t.c.l., same basis lb. .48 - .52
tanks, same basis lb. .42 - —
2,4-D isopropyl ester, dms., c.l., works lb. .43 - —
dms. t.c.l. works lb. .48 - .52
tanks, works lb. .42 - —
Dandelion root, bls lb. .35 - .40
DDD, tech, flake, grd., fib. dms., c.l., works lb. .45 - .47
fib dms., t.c.l., works lb. .46 - .48
DDT, flake or lump, bgs., c.l., dlvd lb. .17 - —
bgs., smaller lots, same basis, lb. .19 - —
fib. dms., c.l., same basis lb. .18 - —
fib. dms., smaller lots, same basis lb. .21 - —
Powdered DDT 1c. per pound higher.
DDVP (see Dimethyl dichlorovinyl phosphate).
i-Decanol, tech., dms., c.l., dlvd. E, lb. .41½- —
dms., t.c.l., dlvd. E lb. .43½- .44½
tanks, dlvd. E lb. .37½- —
Decyl alcohol, mixed isomers, dms., c.l., dlvd lb. .20½- —
dms., t.c.l., dlvd lb. .22 - —
tanks, dlvd. lb. .18 - —
Perfume grade, bots. lb 1.00 2.00
Decyl alcohol, normal (see i-Decanol)
Deertongue leaves, bls. lb. .50 .60
Defluorinated phosphate, feed grade, 14% P, paper bgs., c.l., t.l., Tupelo, Miss ton. 52.00 - —
18% P, paper bgs., c.l., Plant City, Fla ton. 61.25 - —
paper bags, c.l., t.l., Port Arthur, Tex ton. 65.75 - —
paper bgs., c.l., works, Wales Tenn ton. 66.00 - —
19% P, paper bgs., c.l., t.l., works, Houston, Tex ton. 69.35 - —
Prices of defluorinated phosphate in bulk $3 per ton less than bg. c.l. prices
Degras, common (15-17% free fatty acid), 400-lb dms lb. .12 - .14
Neutral (over 2% free fatty acid), 400-lb dms lb. 13 —
Denatured alcohol, ethyl CD-18, CD-19, dms., c.l., dlvd. E. of Rockies gal. 69½- —
dms., t.c.l., same basis gal. 74½ .80½
tanks, dlvd., same basis gal 53½ —
Tankcar sales require written authorization by Alcohol and Tobacco Tax Division.
Denatured alcohol, ethyl, proprietary solvent, dms. c.l., dlvd E of Rockies gal. 72 —
dms., t.c.l., same basis gal. 77 .83
tanks, same basis gal .56 —
Tankcar sales require written authorization by Alcohol and Tobacco Tax Division.
Denatured alcohol, ethyl, SD1, dms., dlvd E of Rockies gal. 70½ —
dms. t.c.l. same basis gal. 75½ .81½
tanks, same basis gal. .54½- —
SD2B, dms c.l. dlvd E of Rockies gal. 69 —
dms. t.c.l., same basis gal. .74 - .80
tanks, same basis gal. .53 - —
SD3A, dms c.l. dlvd E of Rockies gal. 68 —
dms. t.c.l. same basis gal. 73 .79
tanks, same basis gal. .52 - —
SD23A, dms., c.l., dlvd. E. of Rockies gal. .70½- —
dms., t.c.l. same basis gal. .75½ .81½
tanks, same basis gal. .54½- —
SD23H, dms. c.l., dlvd. E. of Rockies gal. .71 —
dms. t.c.l. same basis gal. 76 .82
tanks, same basis gal. .55 —
SD29, dms., c.l., dlvd. E. of Rockies gal. .69½- —
dms., t.c.l., same basis gal. .74½ .80½
tanks, same basis gal. .53½- —
SD30, dms., c.l. dlvd. E. of Rockies gal. .68 —
dms., t.c.l., same basis gal. .73 .79
tanks, same basis gal. .52 —
SD35A, dms., c.l., dlvd. E. of Rockies gal. .71 —
dms., t.c.l., same basis gal. .76 .82
tanks, same basis gal. .55 —
SD-40, dms., dlvd. E. of Rockies, gal. .70½- —
dms., t.c.l., same basis gal. .75½ .81½
tanks, same basis gal. .54½ —
For anhyd. alcohol on above formulas prices are 7c per gal higher
West coast dlvd prices are the same as eastern prices, except in Idaho, Montana, Oregon, and Washington where a 5c. differential on tankcars is maintained
d-Desoxyephedrine hydrochloride, dms lb. 15.00 -17.00
dl-Desoxyephedrine hydrochloride, dms lb 6.40 - —
Dextrin, corn, gum, paper bgs., c.l., works 100 lbs. 9.19 - —
paper bgs., t.c.l. 100 lbs. 9.34 - —
canary dark, paper bgs. c.l. 100 lbs. 9.03 - —
paper bgs., t.c.l. 100 lbs. 9.18 - —
Indust. grade, 6-16 mesh, canary light, paper bgs., c.l. 100 lbs. 8.93 - —
paper bgs., t.c.l. 100 lbs. 9.08 - —
white, paper bgs., c.l. 100 lbs. 8.77 - —
paper bgs., t.c.l. 100 lbs. 8.92 - —
Corn dextrin in cotton bgs 15c per 100 lbs higher
Dextrose anhyd., comi. bgs., c.l. 100 lbs 8.65 - —
bgs. t.c.l 100 lbs 8.80 - —
Anhyd., special, aluminum foil lined fib. dms., 200-lb dms 100 lbs. 14.70 - —
100-lb. dms 100 lbs. 15.20 - —
Hydrated, coml., bgs., c.l. ex ex whse 100 lbs. 7.45 - —
bgs. c.l., ex whse 100 lbs. 7.60 - —
USP dms. lb. .19¾- —
Diacetone alcohol, acetone-free, dms., c.l., dlvd lb. .15½- —
dms., t.c.l., dlvd. lb. .17 - —
tanks, dlvd lb. .13 - —
Tech., dms., c.l., dlvd. lb. .15 - —
dms. t.c.l., dlvd. lb. .16½- —
tanks, dlvd lb. 12½- —
Diacetyl, flavor grade, bots lb. 3.30 4.30
Di-sec-amyl phenol, dms., c.l., works lb. .32 —
dms., t.c.l., works lb. .33 —
tanks, works lb. .29½- —
Di-tert-amyl phenol, dms., c.l., works lb. .32 —
dms., t.c.l., works lb. .33 —
tanks, works lb. .29½- —
Diallylamine, dms., c.l., dlvd. lb. .98½- —
dms. t.c.l., dlvd. lb. 1.00 - —
tanks, dlvd. lb. .96 - —
o-Dianisidine, dry, tech., fib dms. lb 2.00 —
Dibenzyl sebacate, dms., c.l., works, lb. .93 —
dms., t.c.l., same basis lb. .93½- .94
tanks, same basis lb. .91 - —
Dibromobenzene, bgs., 500-lb lots, lb. .55 - —
2,6-Di-tert-butyl-p-cresol, teed grade, c.l., t.l., dms., dlvd. lb. .65 - —
t.t.l., dms., same basis lb. .68 - —
Food grade, c.l., t.l. dms., dlvd, lb. .65 —
dms. t.t.l., same basis lb. .68 1.10
Tech., dms., c.l., t.l., dlvd. lb. .57 —
dms., t.c.l., same basis lb. 60 —
tanks, same basis lb. .54 —
Dibutyl fumarate, dms., c.l., t.l., dlvd. E lb. .31½- —
dms., t.c.l., t.t.l., dlvd. E lb. .33 —
tanks, dlvd. E lb. .29 —

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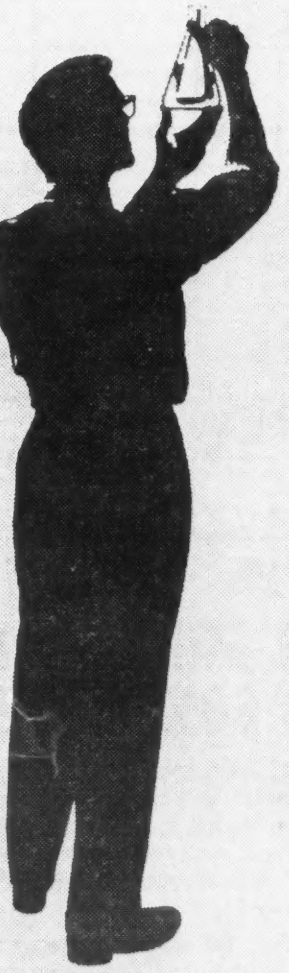
PRESIDENT, PLASTICIZER COMPANY

"The most completely acceptable oxo alcohol on the market today."

PRODUCTION MANAGER,
SYNTHETIC LUBRICANT PRODUCER

"Our production people report better ester colors when using Gulf alcohols."
CHIEF CHEMIST, MAJOR CHEMICAL COMPANY



"We never used a Gulf alcohol where we didn't get good results."
CHIEF ENGINEER, VINYL RESIN PROCESSING COMPANY

Whether it's isooctyl, decyl or tridecyl alcohol or any other petrochemical produced by Gulf, you can be sure of dependable quality time after time. For details contact our Sales Office, 360 Lexington Ave., New York 17, N. Y.
PETROCHEMICALS DEPT., GULF OIL CORPORATION, PITTSBURGH, PA.

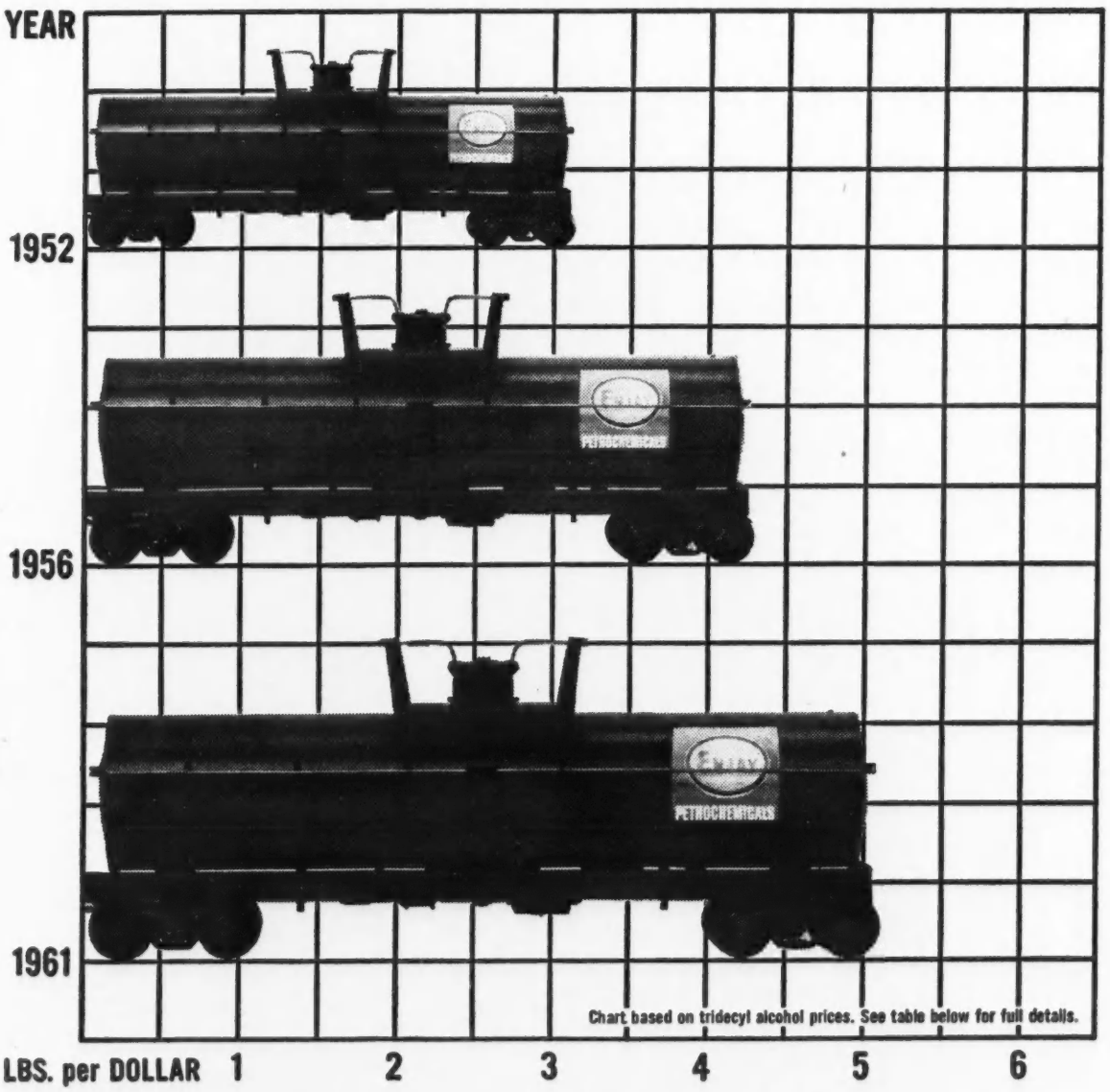
GULF

Dibutyl maleate, dms., c.l., t.l., divd. E lb. .31½- —
dms., l.c.l., t.t.l., divd. E lb. .33 - —
tanks, divd. E lb. .29 - —
Dibutyl phthalate, dms., c.l., divd. E lb. .29¼- —
dms., l.c.l., same basis lb. .30¾- —
tankcars, tanktrucks, 2,000 gals., same basis lb. .26¾- —
tanktrucks, 1,000-1,999 gals., same basis lb. .26¾- —
Dibutyl sebacate, dms., c.l., works. lb. .67½- —
dms., l.c.l., works lb. .68½- —
tanks, works lb. .65½- —
Dibutyl tartrate, dms., works, frt. alld lb. .65½- —
Dibutylamine, dms., c.l., divd lb. .55½- —
dms., l.c.l., same basis lb. .57 - —
tanks, same basis lb. .53 - —
Dicapryl phthalate, dms., c.l., divd. lb. .26 - —
dms., l.c.l., divd. lb. .27½- —
tanks, divd. lb. .23½- —
Dicapryl sebacate, dms., c.l., works. lb. .63 —
dms., l.c.l., works lb. .63½- .64
tanks, works lb. .61 - —
2,5-Dichloroaniline, dms., works lb. .83 - —
3,4-Dichloroaniline, tech., solid, tanks, frt. alld lb. .73 - —
o-Dichlorobenzene, dms., c.l., frt. alld. E lb. .12¾- —
dms., l.c.l., same basis lb. .13¾- —
tanks, same basis lb. .11 - —

p-Dichlorobenzene, dms., c.l., f.o.b. works, frt. alld. E lb. .12 - —
dms., 2,000 lbs. or more same basis lb. .14½- —
1,4-Dichlorobutane, dms., c.l., or t.l., works lb. .33½- —
dms., l.c.l., or t.t.l., works lb. .34 - —
tanks, works lb. .32 - —
Dichlorodiphenyltrichloroethane (see DDT).
2,2-Dichloroethyl ether, dms., c.l., t.l., divd. E lb. .15½- —
dms., l.c.l., t.t.l., same basis lb. .17 - —
tanks, same basis lb. .13 - —
Dichloroisocyanuric acid, dms., c.l., t.l., frt. equald lb. .65 - —
dms., l.c.l., same basis lb. .75 - —
Dichloropentanes, dist., dms., c.l., works lb. .05 - —
dms., l.c.l., works lb. .06 - —
tanks, works lb. .03 - —
Dichlorophenoxyacetic acid (see 2,4-D).
Dicyclohexylamine dms. c.l. works. lb. .54 - —
dms., l.c.l., works lb. .55 - —
tanks, works lb. .52 - —
Dicyclohexyl phthalate, gran., fib. dms., c.l., works, frt. alld. lb. .47½- —
fib. dms., l.c.l., same basis lb. .49 - —
Dicyclopentadiene, dms., c.l., f.o.b. works lb. .14½- —
dms., l.c.l., same basis lb. .14¾- —
tanks, same basis lb. .12 - —

Didecyl phthalate, dms., c.l., works. lb. .25½- —
dms., l.c.l, same basis lb. .27 - —
tankcars, tanktrucks, 2,000 gals. lb. .23 - —
tanktrucks, 1,000-1,999 gals, same basis lb. .23½- —
Dieldrin, dms., c.l., divd. lb. 1.85 - —
dms., l.c.l. divd. lb. 1.90 - —
Diethanolamine, dms., c.l., divd. E. lb. .27 - —
dms., l.c.l., same basis lb. .28½- —
tanks, same basis lb. .24½- —
Diethanolamine lauryl sulfate, dms., c.l., frt. alld lb. .27½- —
dms., l.t.l. frt. alld. lb. .28½- —
tanks, frt alld lb. .26½- —
Diethyl barbituric acid (see Barbital).
Diethyl carbonate, dms., c.l., t.o.b. works lb. .47½- —
dms., l.c.l., same basis lb. .48½- —
tanks, same basis lb. .45 - —
Diethyl ethanolamines, dms., c.l., divd lb. .69½- —
dms., l.c.l., divd. lb. .71 - —
tanks, divd lb. .67 - —
Diethyl oxalate, dms., c.l., f.o.b. works lb. .42½- —
dms., l.c.l. same basis lb. .43½- —
tanks, same basis lb. .40 - —
Diethyl phthalate, dms., c.l., divd. lb. .27¼- —
dms., l.c.l., divd lb. .28¾- —
tanktrucks, 1,000-1,999 gals, same basis lb. .24¾- —
tankcars, tanktrucks, 2,000-lb. lots, same basis lb. .24¼- —
Diethyl sulfate, dms, c.l., frt. alld. E. lb. .21 - —
dms., l.c.l., frt. alld. E lb. .22½- —
tanks, frt. alld. E lb. .18½- —
Diethyl thiourea, dms., c.l., t.l., works lb. .58 - —
dms., l.c.l., same basis lb. .59 - —

Diethyl toluamide, 90-95% meta isomer, dms., c.l., t.l., works. lb. 2.30 - —
5-44 dm. lots, works lb. 2.35 - —
1-4 dm. lots, works lb. 2.40 - —
N,N-Diethyl-m-toluidine, tech., liq., tanks, frt. alld lb. .83 - —
Diethylamine, dms., c.l., divd. E. lb. .52 - —
dms., l.c.l., same basis lb. .53½- —
tanks, same basis lb. .49½- —
N,N-Diethylaniline, dms., c.l., frt. alld lb. .57 - —
dms., l.c.l., same basis lb. .58 - —
tanks, same basis lb. .55 - —
Diethylbenzene, 380 lb. dms., c.l., t.l., frt alld., Zone 1 lb. .17½- —
f.o.b., Zone 2 lb. .18½- —
Diethylbenzene, 380-lb. dms., l.c.l., c.l., f.o.b. Zone 1 lb. .19½- —
f.o.b. warehouse points, Zone 2 lb. .20½- —
tankcars, Zone 1 lb. .15 - —
Zone 2 lb. .16 - —
Zone 1 is East of the Rockies. Zone 2, West of the Rockies
Di-2-ethylhexyl adipate (see Di-octyl adipate).
Di-2-ethylhexyl phthalate (see Di-octyl phthalate).
Diethylene glycol dms. c.l., divd E. lb. .17¾ —
dms., l.c.l., same basis lb. .19¼ —
tanks, same basis lb. .15¼ —
Diethylene glycol diethyl ether, dms., c.l., works lb. .55 —
dms., l.c.l., works lb. .55¾ —
Diethylene glycol monobutyl ether, c.l., dms., frt. alld. E lb. .30¾ —
dms., l.c.l., frt. alld. E lb. .32¼ —
tanks, frt. alld. E lb. .28¼ —
Diethylene glycol monobutyl ether acetate, dms., c.l., works lb. .30¾ —
dms., l.c.l., works lb. .31½ —
tanks, works lb. .28¾ —
Diethylene glycol monoethyl ether, dms., c.l., divd. E lb. .22½- —
dms., l.c.l., divd. E lb. .24 - —
tanks, divd E lb. .20 - —
Diethylene glycol monoethyl ether acetate, dms., c.l., works. lb. .27¼- —
dms., l.c.l., works lb. .28 - —
tanks, works lb. .25¼- —
Diethylene glycol monomethyl ether, dms., c.l., divd. E lb. .21 - —
dms., l.c.l., divd. E lb. .22½- —
tanks, divd E. lb. .18½- —
Diethylenetriamine, dms., c.l., divd. E lb. .44 —
dms., l.c.l., divd. E. lb. .45½- —
tanks, divd. E. lb. .41½- —
Diethylstilbesterol, USP, bots. 10-kilo lots kilo. 100.00 147.50
bots. 1-kilo lot kilo 110.00 152.50
Digitalis leaves USP dom. dms lb 1.25 —
Digitoxin, USP, bots gram 3.75 4.20
Diglycol laurate, dms., ton lots lb. .32½- —
Diglycol stearate, dms., t.l lb. .26 —
Diglycolic acid, bgs. c.l. t.l., works. lb. .15½- —
bgs. l.c.l. works lb. .16 —
Dihexyl sebacate, dms., c.l., works. lb. .66 - —
dms., l.c.l., works lb. .67 - —
tanks, works lb. .64 - —
Dihydrazine sulfate, dms., works lb. 1.10 1.25
Dihydrostreptomycin sulfate, bulk. gram .028 - .03
1,2-Dihydroxy anthraquinone, dms., works lb. 3.45 - —
2,2-Dihydroxy-5-5-dichloro-diphenyl-methane, pure, dms lb. 2.55 - —
Tech., dms., 20,000 lbs or more lb 1.11 - —
dms. 1,050 lbs to 20,000 lbs. lb 1.13 - —
dms. 150 lbs to 1,050 lbs lb. 1.15 - —
Di-isobutyl ketone, dms., c.l., divd. lb. .17 —
dms., l.c.l., divd. lb. .18½- —
tanks, divd lb. .14½- —
Di-isobutyl phthalate, dms., c.l., divd. E lb. .28 - —
dms., l.c.l., same basis lb. .29½- —
tanks, same basis lb. .25½- —
Di-isobutylene, dms., c.l., divd. E lb. .10 —
dms., l.c.l., divd. E lb. .11½- —
tanks, divd E lb. .08 —
Di-isodecyl phthalate, dms., c.l., frt. alld. E lb. .25½- —
dms., l.c.l., frt. alld. E lb. .27 - —
tanktrucks, 1,000-1,999 gals., same basis lb. .23½- —
tanktrucks, 2,000 gals., same basis lb. .23 - —
Di-iso-octyl phthalate, dms., c.l., works lb. .25 - —
dms., l.c.l., same basis lb. .26½- —
tanktrucks, 1,000-1,999 gals., works lb. .23 - —
tankcars, tanktrucks, 2,000 gals., works lb. .22½- —
Di-iso-octyl sebacate, dms., c.l., works lb. .59 - —
dms., l.c.l., works lb. .59½- .60
tanks, works lb. .57 - —
Di-isopropanolamine, dms., c.l., divd. lb. .23¼- —
dms., l.c.l., same basis lb. .24¾- —
tanks, same basis lb. .20¾- —
Di-isopropylamine, dms., c.l., divd. E. of Rockies lb. .50½- —
dms., l.c.l., same basis lb. .52 - —
tanks, same basis lb. .48 - —
Dillweed oil, dom., bots., dms lb. 4.00 - —
Dimethyl anthranilate, cns lb. 4.15 - —
Dimethyl dichlorovinyl phosphate, 55-gal. dms., divd lb. 3.50 - —
Dimethyl ethanolamine, anhyd., dms., c.l., divd. E lb. .78 - —
dms., l.c.l., divd. E lb. .79½- —
tanks, divd. E lb. .75½- —
Dimethyl ethanolamine, 70%, dms., c.l., divd., 100% basis, contained amines lb. .78 —
dms., l.c.l., divd., 100% basis. lb. .79½- —
tanks, divd., 100% basis lb. .75½- —
Dimethyl hydroquinone, dms. lb. 1.90 2.20
Dimethyl phthalate, dms., c.l., works lb. .26¾- —
dms., l.c.l., works lb. .27¼- —
tanktrucks, 1,000-1,999 gals., same basis lb. .24¾- —
tankcars, tanktrucks, 2,000 gals., same basis lb. .24¼- —
Dimethyl sebacate, dms., c.l., works. lb. 1.30 - —
dms., l.c.l., works lb. 1.30½- 1.31
tanks, works lb. 1.28 —
Dimethyl sulfate, ret. dms., c.l., works lb. .17½- —
ret. dms., l.c.l., works lb. .18½- —
tanks, works lb. .16½- —
Dimethyl sulfide, dms., c.l., works. lb. .17½- —
dms., l.c.l., works lb. .18½- .19½
tanks, works lb. .15 - —
Dimethyl sulfoxide, dms., c.l., f.o.b. works lb. .35 - —
dms., l.c.l., same basis lb. .37 - .38
tanks, same basis lb. .33 - —
Dimethylamine, 25% soln., dms., c.l., frt. equald, 100% basis lb. .38 —
dms., l.c.l., frt. equald, 100% basis lb. .38½- —
tanks, frt. equald, 100% basis lb. .28 - —
40% soln., dms., c.l., frt. equald., 100% basis lb. .35 - —
dms., l.c.l., frt. equald, 100% basis lb. .35½- —
tanks, frt. equald., 100% basis lb. .28 - —



LOWER PRICES MEAN YOUR DOLLAR BUYS UP TO 60% MORE ALCOHOL THAN IN 1952!

Expanded facilities, increased sales and production economies have enabled Enjay to pass substantial savings along to its oxo alcohol customers over the years. The table at right shows you how much more isooctyl, decyl, or tridecyl alcohol your dollar buys today as compared to 1952.

At the same time, the quality of Enjay alcohols is constantly being improved. Enjay also stands ready with technical assistance on any problems you may have. These are two added advantages of dealing with a leader in the chemical field.

For more information on the full line of Enjay alcohols and chemicals, write to Enjay, 15 West 51st Street, New York 19, N. Y.

YOUR ALCOHOL DOLLAR BUYS:	1952	1956	1961
ISOOCTYL (lbs.)	3.8	4.8	5.6
DECYL (lbs.)	3.6	4.8	5.6
TRIDECYL (lbs.)	3.1	4.2	5.0

EXCITING NEW PRODUCTS THROUGH PETRO-CHEMISTRY

ENJAY CHEMICAL COMPANY

A DIVISION OF HUMBLE OIL & REFINING COMPANY

ENJAY

N,N-Dimethylaniline, dms., c.l., frt. alld. lb. .28 • —
dms., l.c.l., same basis lb. .29 • —
tanks, same basis lb. .26 • —
N,N-Dimethylformamide, dms., c.l., t.l., works lb. .32½- —
dms., l.c.l., works lb. .33 • .34
tanks, works lb. .30 • —
2,4-Dinitroaniline, dms., frt. alld lb. .75 • —
Dinitroaniline orange toner, CP, bbls., divd E. of Rockies. lb. 1.61 • —
Dinitroaniline orange toner prices 1c. higher W of Rockies.
m-Dinitrobenzene, 89°C., dms. lb. .26 • —
2,4-Dinitrochlorobenzene, crystallizing at 46½°C., dms., c.l., frt. alld. E lb. .17¼- —
dms., l.c.l., frt. alld. E. lb. .17¾- —
tanks, frt. alld. E. lb. .17 • —
2,4-Dinitrophenol bbls. lb. .41 • —
2,4-Dinitrotoluene, oil, dms. lb. .11 • —
Refd., 63°C., dms. lb. .23 • —
Dioctyl adipate, dms., c.l., works. lb. .37½- —
dms., l.c.l., works lb. .39 • —
tanks, works lb. .35 • —
Dioctyl phthalate, dms., c.l., frt. alld. E lb. .25 • —
dms., l.c.l., frt. ald. E lb. .26½- —
tanktrucks, 1,000-1,999 gals., same basis lb. .23 • —
tankcars, tanktrucks, 2,000 gals., same basis lb. .22½- —
Dioctyl phthalate prices ¾c. higher in West.
Dioctyl sebacate dms., c.l., works. lb. .59 • —
dms., l.c.l., works lb. .59½- .60
tanks, works, dlvd lb. .57 • —
1,4-Dioxane, dms., c.l., frt. alld. E. lb. .31½- —
dms., l.c.l., frt. alld. E lb. .33 • —
tanks, frt. alld. E lb. .29 • —
Prices in the west are 2c. per lb. higher.
Dipentaerythritol bgs. c.l., t.l., divd. E lb. .34 • —
bgs., l.c.l., t.l., divd. E lb. .35 • —
Dipentene, dest.-dist., dms., c.l., works gal. .58 • —
dms., l.c.l., works lb. .62 • —
dms., l.c.l. ex whse. gal. .78 • —
tankcars, works gal. .41 • —
Dipentane, steam dist., dms., c.l., works South gal. .72 • —
dms., l.c.l., divd. New York gal. .91 • —
tanks, works, South lb. .55 • —
Dip oil (see Tar acid oil).
Diphenolic acid 1,000-lb. or more, bgs., works lb. .75 • —
Diphenolic polyether acids, 1,000-lb. or more, bgs., works lb. 1.00 • —
Diphenyl, bgs., c.l. t.l., works lb. .16¾- —
bgs., l.c.l., works lb. .18½- —
tanks, works lb. .15¾- —
Diphenyl oxide perfume grade, cns. lb. .55 • .70
Diphenyl phthalate dms., c.l., works. lb. .51 • —
dms., l.c.l., works lb. .53 • —
Diphenylamine refd., flake, bgs., c.l., works, frt. equald lb. .32 —
bgs., l.c.l., same basis lb. .34 —
Refd., fused tanks, same basis lb. .29 • —
Refd., diphenylamine in dms., ½c. per lb higher
Diphenylguanadine bgs., dms., ton lots, frt. alld. lb. .51 • —
bgs., smaller lots, frt. alld lb. .52 • —
Diphenylhydantoin-sodium, USP, dms lb. 5.00 • 5.60
Dipropylene glycol dms., c.l., frt. alld lb. .17 • —
dms., l.c.l. frt. alld. lb. .18½- —
tanks, frt. alld lb. .14¼- —
Dipropylene glycol prices 1c. higher in West.
Dipropylene glycol methyl ether, dms., c.l., divd. E lb. .20 —
dms., l.c.l., same basis lb. .21½- —
tanks, same basis lb. .18½- —
Dithiodibenzoic acid dms., 1,000-lb. lots, works lb. 1.80 • —
Di-o-tolylguanidine dms., ton lots, frt. alld lb. .71 • —
dms., smaller lots, frt. alld lb. .72 • —
Di-o-tolylthiourea, tech. solid, dms., c.l. t.l., frt. alld lb. .58 • —
Ditridecyl phthalate, dms., c.l., frt. alld. E lb. .29¼- —
dms., l.c.l., frt. alld. E lb. .30¾- —
tanktrucks, 1,000-1,999 gals., same basis lb. .27¼- —
tanktrucks, 2,000 gals., same basis lb. .26¾- —
Divinylbenzene, 20-25%, dms., c.l., works, frt. equald lb. .20 • —
dms., l.c.l., same basis lb. .21 • —
tanks, same basis lb. .19 • —
50-60%, dms., c.l., works, 100% basis lb. 1.00 • —
dms., l.c.l., works, 100% basis, lb. 1.05 • —
tanks, same basis lb. .90 • —
Dodecenyl succinic anhydride, dms., c.l., t.l., divd. E lb. .50 • —
dms, l.c.l., t.l. same basis lb. .52 • —
Dodecylbenzene, dms., c.l., t.o.b., works, frt equald lb. .134 • —
dms., l.c.l., same basis lb. .144 • —
tanks, same basis lb. .11 • —
Dodecylphenol c.l. frt. alld. lb. .22½- —
dms., l.c.l., same basis lb. .23½- —
tanks, same basis lb. .20 • —
Dodecylphenol prices on shipments to Western States are 2c. per pound higher.

Dyes, coaltar, certified colors for food, drugs and cosmetics, 500-lb. and 25-lb.lots, frt. prepaid or alld.

Blue, FD&C, No. 1	lb.15.65	-16.45
No. 2	lb.15.65	-16.45
Green, FD&C, No. 1	lb.15.65	-16.45
No. 2	lb.19.60	-20.40
No. 3	lb.31.30	-32.10
Red, FD&C, No. 2	lb. 3.60	- 4.40
No. 3	lb.19.60	-20.40
No. 4	lb. 6.00	- 6.80
Yellow, FD&C, No. 5	lb. 3.75	- 4.55
No. 6	lb. 3.65	- 4.45

Dyes, coaltar, certified colors for drugs and cosmetics, 200-lb and 1-lb. lots, divd.:

Black, D&C, No. 1	lb.12.40	-13.00
Brown, D&C, No. 1	lb.16.35	-16.95
Green, D&C, No. 5	lb.17.00	-17.60
No. 6	lb.17.40	-18.00
No. 7	lb.14.35	-14.95
Orange, D&C, No. 3	lb.10.50	-10.95
No. 4	lb.19.60	-20.05
No. 5	lb. 3.80	4.25
Red, D&C, No. 17	lb.12.55	-13.15
No. 18	lb.23.55	-24.15
No. 19	lb.15.00	-15.45
No. 21	lb. 3.90	- 4.35
No. 22	lb.10.50	-10.95
No. 28	lb.27.90	-28.50
No. 33	lb.17.00	-17.45
Violet, D&C, No. 2	lb.15.65	-16.10
Yellow, D&C, No. 7	lb.10.50	-10.95
No. 8	lb.10.50	-10.95
No. 10	lb.15.10	-15.70
No. 11	lb.14.80	-15.40

Dyes, coaltar, certified colors for drugs and cosmetics, external use, 500-lb and 1-lb. lots divd.:

Blue Ext. D&C, No. 1	lb.15.65	-16.10
Green, Ext. D&C, No. 1	lb.15.65	-16.10
Red, Ext. D&C, No. 1	lb 13.05	-13.50
Yellow, Ext. D&C, No. 1	lb.10.50	-10.95

Dyes, coaltar for general use in cloth dyeing (numbers are those of the Color Index scale or prototype), contract dlvd. No.

11110 Brilliant scarlet BN	lb.	1.79	• —
13390 Fast blue SR	lb.	1.57	• —
14025 Yellow 2G	lb.	1.32	• —
14030 Orange R, extra, conc.	lb.	1.64	• —
14645 Chrome black T	lb.	.77	• —
14720 Rubine XX, conc	lb.	1.76	• —
15510 Orange Y, extra conc.	lb.	.83	• —
15575 Orange RR	lb.	1.10	• —
15620 Fast Red A, conc.	lb.	1.77	• —
15705 Chrome blue black R, conc.	lb.	1.12	• —
16150 Scarlet 2RL	lb.	1.22	• —
16255 Brilliant scarlet 3RN, conc.	lb.	1.34	• —
16230 Fast light, orange 2G	lb.	1.39	• —
17590 Brown PG	lb.	3.00	• —
18050 Phloxine 2G	lb.	1.16	• —
18055 Fuchsine 6B	lb.	1.55	• —
18965 Fast yellow 2G	lb.	2.44	• —
19140 Yellow XX	lb.	2.48	• —
19555 Yellow NN, conc.	lb.	3.67	• —
20170 Brown Y	lb.	1.33	• —
20470 Blue black, extra, conc.	lb.	1.44	• —
21010 Brown, RX, conc.	lb.	1.42	• —
22240 Scarlet B	lb.	2.81	• —
22310 Red FC	lb.	1.57	• —
22311 Brown MCW	lb.	1.59	• —
22610 Blue 2B, extra conc.	lb.	1.62	• —
23500 Red, 4BX, conc.	lb.	1.80	• —
24410 Sky blue FF, extra, conc.	lb.	1.95	• —
24895 Brilliant yellow, conc.	lb.	3.27	• —
26360 Navy blue 3R, conc.	lb.	1.84	• —
26695 Black F, conc.	lb.	2.30	• —
26900 Milling Red 3R, conc.	lb.	2.24	• —
27075 Neutral black 2B, conc.	lb.	2.75	• —
27720 Gray L	lb.	2.29	• —
29185 Fast scarlet 4BNC	lb.	2.23	• —
30015 Diazo black VJ conc.	lb.	2.48	• —
30045 Yellow brown K, extra	lb.	1.45	• —
30235 Black EB, 200%	lb.	1.33	• —

Dyes, coaltar for general use in cloth dyeing (numbers are those of the Colour index scale of prototype), contract, dlvd. No.

30295 Green BY, conc.	lb.	1.07	• —
35650 Brown B	lb.	2.89	• —
37565 Naphthol SWF	lb.	1.85	• —
40000 Yellow 2G	lb.	1.44	• —
41000 Yellow OX	lb.	2.45	• —
42000 Green V, crystals	lb.	2.73	• —
42040 Brilliant green G crystals	lb.	3.62	• —
42640 Violet 4BXN	lb.	2.43	• —
42090 Blue EG	lb.	1.85	• —
42100 Milling green 6B, conc.	lb.	4.78	• —
43830 Brilliant blue, BBG	lb.	2.44	• —
44045 Blue B, extra conc.	lb.	3.61	• —
45170 Red BX	lb.	4.76	• —
50415 Nigrosine SSJ	lb.	1.03	• —
52015 Blue GXX	lb.	2.54	• —
58005 Alizarin red SC	lb.	3.64	• —
59700 Golden orange GFD, single paste	lb.	2.70	• —
59710 Flaming orange 6RD double powder	lb.	4.90	• —
59800 Dark blue BO, single paste.	lb.	2.28	• —
59825 Jade green NC supra, double paste	lb.	1.73	• —
61570 Alizarin green CG, extra	lb.	4.00	• —
63010 Alizarin blue SAPG	lb.	3.90	• —
63615 Alizarin blue black B	lb.	3.26	• —
69825 Blue BLFD double paste	lb.	2.76	• —
70805 Brown BR single paste	lb.	2.03	• —
Dyes, coaltar, oil-soluble, 100 lb. drums, divd. No.			
12140 Oil scarlet BL	lb.	1.87	• —
12055 Oil orange 7078 V	lb.	1.38	• —
26120 Oil red N 1700	lb.	1.94	• —

Dyes, coaltar, oil-soluble, 100-lb drums, divd. No.

42535B Methyl violet base	lb.	1.83	• —
44045B Victoria blue base	lb.	4.06	• —
50415B Oil black 8603	lb.	.80	• —
61565 Alizarin cyanine green base.	lb.	6.13	• —

Dyes, coaltar, spirit soluble, 100 lb. dms., divd., Black RB lb. 3.89 • —
Spirit brown GN lb 5.30 • —
Spirit orange R conc. lb 5.87 • —
Spirit red B conc. lb 6.41 • —
Pr. 517 Spirit yellow 2R conc lb 4.62 • —
Pr. 554 Spirit blue THN lb. 5.06 • —

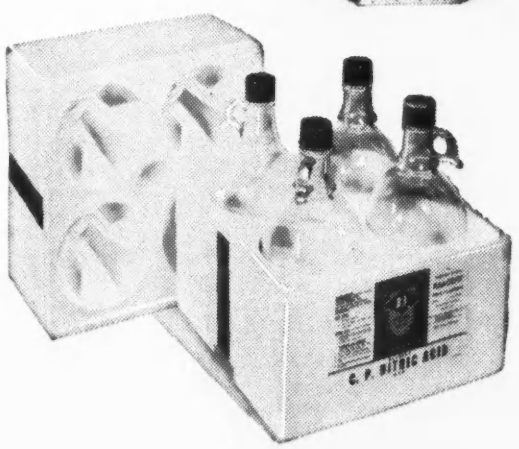
E

Echinacea root, bls.	lb.	1.25	• —
Elm bark, grinding, bls.	lb.	.30	• .32
Powd., bbls., bxs.	lb.	.60	• —
Select, bundles	lb.	.75	• —
Emetine hydrochloride, USP, bots	oz.	48.40	• —
Endrin, tech., dms., 100-lbs. or more, 100% basis, divd	lb.	2.77	• —
Eosin red toner, bbls., works	lb.	1.95	• —
Ephedrine, syn., USP, anhyd., bots. 100-oz.lots	oz.	.98	• 1.00
hydrous, bots., 100-oz. lots.	oz.	.92	• —
Ephedrine hydrochloride, NF, dms., 100-oz., f.o.b. works	oz.	.73	• —
Ephedrine sulfate, USP, cryst., dms., 100-oz. f.o.b. works	oz.	.73	• —
USP, powd., dms., 100-oz., same basis	oz.	.73	• —

2 Advanced New "Shippers" for General Chemical Acids

...safer, lighter, more convenient for you!

1 New expanded polystyrene overpack for General Chemical's 13-gallon acid carboy. This new acid carboy overpack won the 1960 "Best of Show" award from the Society of Packaging and Handling Engineers. Here's why: underneath a rugged, wire-bound, wooden outer shell, inch-thick foamed-in-place polystyrene cushions General Chemical's 13-gallon commercial acid carboy. The new overpack is safer . . . protects the carboy from shock in shipping and handling. It's lighter . . . 40% less tare weight. It's smaller . . . increases shipping and storage capacity 30-35%.



2 New expanded polystyrene case for Baker & Adamson® "C.P." Acids. An exclusive new development of B&A, this new one-way shipper cradles four 5-pint acid bottles in form-fitted pockets. Safer . . . meets the most stringent ICC drop test requirements. Light . . . weighs less than 11 pounds with empty bottles. Easy to handle and store . . . convenient finger grips make it easy to lift and carry . . . top and bottom interlock for safer stacking.

These two important new advances from General Chemical are typical of the advanced packaging introduced by General Chemical to protect the quality of its products. Call or write your nearest General Chemical office for information about availability of commercial and "C.P." acids in your area in these new, safer and more convenient packages.

Allied Chemical

GENERAL CHEMICAL DIVISION
40 Rector Street, New York 6, N. Y.

Epichlorohydrin—Fishmeal

Epichlorohydrin, dms., c.l., dlvd lb. .29½- —
dms., l.c.l., dlvd. lb. .31 - —
tanks, dlvd. lb. .27 - —
Epinephrine base, syn., USP, bots., 100 gram lots gram. .58 - —
Epsom salt (see Magnesium sulfate).
Erigeron oil, cns. lb.11.00 —
Ergot, NF, dms., tin-lined lb 2.00 2.50
Eserine salicylate, bots. oz.34.50 40.00
Eserine sulfate, bots. oz.26.00 - —
Ester gum, gum rosin type, dms., c.l., dlvd., Ill., Md., Ky., E. States, Minneapolis, N. C., Ohio, St. Louis, St. Paul, Va., W. Va. lb. .18½- —
Ester gum, wood-rosin type, dms., c.l. same basis lb. .18½- —
Ether (see specific product)
Ethyl acetate, nat., ferment, 85-88%, dms., c.l. dlvd lb .15 —
dms., l.c.l., dlvd lb 16½- —
tanks dlvd lb 12½ —
95-98% dms., c.l., dlvd lb .15¼ —
dms., l.c.l., dlvd lb 16¾ —
tanks dlvd lb 12¾ —
99%, dms., c.l., dlvd. lb. .15½- —
dms., l.c.l., dlvd lb .17 —
tanks dlvd lb .13 —
Syn., 85-88%, dms., c.l., dlvd lb. .15 - —
dms., l.c.l., dlvd lb 16½ —
tanks dlvd lb 12½ —
95-98%, dms., c.l., dlvd. lb. .15¼- —
dms., l.c.l., dlvd lb 16¾ —
tanks dlvd lb 12¾ —
99% dms., c.l., dlvd. lb. .15½- —
dms., l.c.l., dlvd lb .17 —
tanks dlvd lb 13 —

Ethyl acetoacetate, dms., c.l., dlvd. lb. 58½- —
dms., l.c.l., dlvd. lb. .60 —
tanks, dlvd lb. .56 —
Ethyl acrylate, dms., c.l., t.l., dlvd. lb. .34¾- —
dms., l.t.l., dlvd lb. .35¾- —
tanks, dlvd. lb. .32¼- —
Ethyl alcohol, 190 pf., USP, tax paid dms., c.l., dlvd E of Rockies gal. 20.63 —
dms., l.c.l., same basis gal. 20 73 -20 84
USP, tax-free, dms., c.l., dlvd. E of Rockies gal. .68 —
Ethyl alcohol, 190 pf., USP, tax free, dms., l.c.l., same basis gal. .78 .89
tanks, same basis gal. .52 —
Ethyl alcohol, absolute 200 pf., tax paid, dms., dlvd E of Rockies gal. 21 75 —
dms., l.c.l., same basis gal. 21 85 -21 96
tanks, same basis gal. 21 59 —
Ethyl alcohol, denatured (see Denatured alcohol, ethyl)
Ethyl aminobenzoate, USP (see Benzocaine).
Ethyl amyl ketone, dms., c.l., dlvd. lb. .20 —
dms., l.c.l., same basis lb. .21½ —
tanks, same basis lb. 17½ —
Ethyl benzoate, bots. lb. .75 1.00
Ethyl bromide, tech., 98%, dms., c.l., frt. alld. E lb. .43 —
dms., l.c.l., frt. alld. E lb. .45 - —
tanks, frt. alld. E lb. .40 - —

2-Ethyl butyl alcohol, dms., c.l., works lb. .30 - —
dms., l.c.l., works lb. .30¾- —
tanks, works lb. .28 - —
Ethyl butyl ketone, dms., c.l., t.l., works lb. .36 - —
dms., l.c.l., t.l. works lb. .36¾- —
tanks, works lb. .34 - —
Ethyl butyrate, dms., works lb. .85 - 1.00
Ethyl carbamate (see Urethane)
Ethyl cellulose, vis., 4 cps., bgs., 5,000-lb. lots or more, frt. alld. E lb. .73 - —
bgs., smaller lots, frt. alld. E lb. 75 - —
vis. 10, 20, 50, 100, 150 cps., bgs., 5,000-lb. lots or more, frt. alld. E lb. .68 - —
Ethyl cellulose, vis., 10,20,50,100,150 cps., bgs., smaller lots, frt. alld. E lb. .70 - —
Ethyl chloride, tech., cyls., works, lb. .20 22
dms., works lb. .18 20
tanks, works lb. .10 —
Ethyl cinnamate, cns. lb. 3.35 3.50
Ethyl ethanolamines, mixed, dms., c.l., dlvd E lb. .43½- —
dms., t.c.l., dlvd E lb. .44½- —
tanks dlvd E lb. .41½- —
Ethyl ether, absolute, ACS, dms. lb. .37 - —
Anesthesia, USP, dealers, 1-lb. cns lb. 1.01 - —
½-lb. cns. lb. 1.09 - —
¼-lb. cns. lb. 1.21 - —
Indust., dms., c.l., dlvd. lb. .13½- —
dms., t.c.l., dlvd E lb. .15 - —
tanks, dlvd E lb. .11 - —
2-Ethyl hexoic acid, dms., c.l., t.l., dlvd. E lb. .37 - —
dms., t.c.l., t.t.l., dlvd. E lb. .36½- —
tanks, dlvd E lb. .34½- —
2-Ethyl hexoic acid 1c. higher W. of Rockies.

2-Ethylhexyl acrylate, dms., c.l., t.l., straight or mixed, frt. alld. E lb. .39½- —
dms., l.t.l., same basis lb. .40½- —
tanks, same basis lb. .37 - —
2-Ethylhexyl alcohol, dms., c.l., dlvd, E lb. .20½- —
dms., t.c.l., dlvd, E lb. .22 - —
tanks, dlvd. E lb. .18 - —
Ethyl iodide, chys., works lb. 3.30 - —
Ethyl methacrylate, dms., c.l., frt. equald lb .52 —
dms., t.l.l. frt equald lb 52½- —
tanks, frt. equald lb 50 —
Ethyl morphine hydrochloride, USP, bots oz.11.85 - —
Ethyl oenanthate, dms lb 1.05 1.30
Ethyl oxalate (see Diethyl oxalate).
Ethyl silicate, dist. (see Tetraethyl orthosilicate).
Ethyl silicate, 40% available SiO, dms., c.l., dlvd. E lb. .40 - —
dms., t.c.l., dlvd. E lb. .50½- —
tanks, dlvd. E lb. .47 - —
N-Ethyl-a-naphthylamine, dms., works, lb. 1.04 - —
N-Ethyl-m-toluidine, tech., uq., tanks frt alld lb .83 - —
N-Ethyl-o-toluidine, bbls lb. .88 - —
Ethylamine (see Mono-, Di- or Tri-)
N-Ethylaniline, dms., c.l., frt. alld. lb. .57 - —
dms., t.c.l., frt. alld lb. .58 - —
tanks, frt. alld lb. .55 —
Ethylbenzene, 99%, dms., c.l., t.l., frt. equald lb. .14 —
dms., t.c.l., same basis lb. .16 —
tanks, same basis lb. .11½- —
Ethylene, contract refy gate lb .0475- .052a
Ethylene dibromide, dms., c.l., frt. equald lb .30½ —
dms., t.c.l. frt equald lb .31½ —
tanks frt equald lb 28½ —
Ethylene dichloride, dms., c.l., dlvd. lb .11½- —
dms., t.c.l., same basis lb .13 —
tanks, same basis lb .09 —
Ethylene dichloride prices W. of Rockies, 1c per lb higher
Ethylene glycol, indust., dms., c.l., dlvd E lb. .16 —
dms., t.c.l., same basis lb. .17½ —
tanks, same basis lb. .13½- —
Ethylene glycol monobutyl ether, dms., c.l., dlvd E lb. .22 —
dms., t.c.l., dlvd E lb. .23½ —
tanks, dlvd E lb. 19½ —
Ethylene glycol monoethyl ether, dms., c.l., dlvd E lb. .21 —
dms., t.c.l., dlvd E lb. .22½- —
tanks, dlvd E lb. .18½- —
Ethylene glycol monoethyl ether acetate, dms., c.l., dlvd. E lb. .19½- —
dms., t.c.l., dlvd. E lb. .21 - —
tanks, dlvd E lb. .17 —
Ethylene glycol monomethyl ether, dms., c.l., dlvd E lb. .21 —
dms., t.c.l., dlvd E lb. .22½- —
tanks, dlvd E lb. .18½- —
Ethylene glycol monomethyl ether acetate, dms., c.l., works lb. .29 - —
dms., t.c.l., works lb. .29¾- —
tanks, works lb. .27 - —
Ethylene glycol monostearate, flake, 150-lb. drm lb. .33 - —
Ethylene oxide, dms., c.l., dlvd E, lb. .21½ —
dms., t.c.l., dlvd E lb. .24½- —
tanks, dlvd E lb. .15½- —
Ethylene trichloride (see Trichloroethylene)
Ethylenediamine, 85-88%, dms., c.l., dlvd. E., 100% basis lb. .40 - —
dms., t.c.l., dlvd E, 100% basis, lb. .41½- —
tanks, dlvd. E., 100% basis lb. .38 - —
Ethylvanillin, 100-lb. fib. dms., 500-lb. 6.75 - —
less than 500-lb. lb. 7.40 - —
Eucalyptol, USP, cns., dms lb .85 1.40
Eucalyptus oil, NF, rectified, 70-75% dms lb. .45 —
NF, rectified, 80-85% dms lb 53 .62
USP, dms. lb. 1.90 - —
Euphorbia herb, bls lb. .12 .15

F

F salt paste, tech., dms., works lb 2.50 - —
Fennel oil, sweet, USP, cns. lb. 2.60 - —
Fennel seed, Argentine, bgs. lb. .16 - —
French, light, bgs. lb. .16½- —
Indian, light, bgs. lb. .16½- —
Yugoslav, light, bgs. lb. .17½- —
Fenugreek seed, Moroccan, bgs. lb. .12 - —
Ferric chloride, anhyd., tech., 350-lb. dms., c.l., works 100 lbs. 8.00 - —
dms., t.c.l., works 100 lbs. 9.00 - —
Ferric chloride 42° Be., photo grade, dms., c.l., works 100 lbs. 7.25 - —
sewage grade, tanks, frt equald. 100% basis 100 lbs. 4.00 - —
USP cryst. dms. t.l. works lb. .08½- —
Ferric citrate, gran., dms lb. .86 - —
Ferric hypophosphite, NF, 175-lb. drm lb. 4.25 - —
Ferric naphthenate, liq., 6% Fe, dms., frt alld lb. .28¼- —
Ferric oxalate, tech., gran., 50-lb. drm., f.o.b. works E lb. 1.30 - —
Ferric oxides (see Iron oxides)
Ferric phosphate, NF, soluble, gran pearls, cs lb. .72 - .75
Ferric pyrophosphate, NF VII soluble, gran. pearls, 225-lb. drm lb. .79 - —
Ferric resinate, dms., ton lots, frt, alld lb. .45 - —
Ferric stearate, dms., c.l., frt allt. lb. .39 - —
dms., t.c.l., frt allt lb. .40 - .44
Ferric sulfate, partly hydrated, bgs., c.l., works ton.35.25 —
bgs., t.c.l., works ton.36.25 -42.25
bulk, c.l., works ton.33.25 - —
Ferric-amonium citrate, NF, brown, gran., 100-lb. dms lb. .68 - —
NF, green, gran., 100-lb. dms., frt. equald lb. .68 - —
Ferric-ammonium oxalate, fine gran., dms lb. .27½- .29½
Ferric-potassium oxalate, fine gran., 250-lb drm., f.o.b. works lb. .32½- —
Ferric-sodium oxalate, fine gran., dms lb. .27½- .29½
Ferrous gluconate, USP, 200-lb. drm., frt. equald lb. .96 - —
Ferrous sulfate, gran., bgs., c.l., works ton.34.50 - —
bgs., t.c.l., dlvd. Metropolitan area 100 lbs. 3.35 4.25
bbls., c.l., works ton 40.00 - —
bulk, c.l., works ton.27.00 - —
USP cryst., bbls., dms. lb 09½- 10
Fir balsam, Canada, bbls gal.34.00 -35.00
Oregon, bbls gal. 3.40 4.64
Fir oil, Canada, cns lb. 1.70 - 1.75
Fish oil, refd., alkali, dms. lb. .1380- .1430
Kettle-bodied, dms. lb. .1530- .1580
Light-pressed, dms. lb. .1280- .1330
tanks lb. .1080- —
Fishliver oil, nat., high potency, 100,000 to 1,500,000 A units per gram, dms 1,000,000 units. .12 - —
Fishmeal, dom., menhaden, 60% protein, grd., bgs., Atlantic and Gulf coasts. ton.118.00 -120.00

DEPENDABLE PFIZER CHEMICALS

FOR METAL FINISHING ↓

	CITRIC ACID	SODIUM CITRATE	AMMONIUM CITRATE	GLUCONIC ACID	GLUCONO DELTA-LACTONE	SODIUM GLUCONATE	OXALIC ACID	AMMONIUM OXALATE	FERRIC AMMONIUM OXALATE	TARTARIC ACID	TARTAR EMETIC	ROCHELLE SALT	CREAM OF TARTAR
CLEANING	•	•	•	•	•	•	•	•		•			•
POLISHING	•	•	•	•	•	•	•	•		•			
PICKLING	•		•	•	•		•			•		•	
ELECTROPLATING	•	•	•	•	•	•	•	•		•	•	•	•
ELECTROPOLISHING	•						•						
NON-ELECTROLYTIC DEPOSITIONS	•	•											
ELECTROLYTIC OXIDATION	•						•						
ETCHING	•			•	•	•	•			•			
GOLD COLORING OF ALUMINUM							•	•	•				

CITRIC ACID... Non-toxic, mild, yet chemically active against scale and tarnish. Used extensively in the formulation of general metal cleaners and polishes, particularly household products.

SODIUM CITRATE... A preferred ingredient in electroless nickel baths, resulting in a brighter plate. Also finds wide use in electroplating processes.

AMMONIUM CITRATE... Especially useful for the removal of rust in near neutral solutions. Extremely mild and safe to handle.

GLUCONIC ACID... An excellent sequesterant in alkaline derusting solutions; provides rust-free, clean surface ready for further treatment. Also highly effective in aluminum etching and paint stripping compounds.

OXALIC ACID... The most effective chemical for use in automobile radiator cleaners. Also finds wide use in electropolishing and as an ingredient in general metal cleaners.

FERRIC AMMONIUM OXALATE... Used extensively in the production of light-fast gold-colored aluminum.

TARTARIC ACID... Excellent complexing agent for copper in electroplating.

TARTAR EMETIC... Used in electrolytic baths for deposition of silver and antimony alloys on brass, copper and steel surfaces.

ROCHELLE SALT... Increases efficiency and yields finer-grain deposit in alkaline copperplating.

CREAM OF TARTAR... An excellent additive for brass and aluminum cleaning compounds. Its crystalline structure acts as an effective abrasive in paste polishes. Chemically active against tarnish.

For further details write to Chas. Pfizer & Co., Inc., Chemical Division, Brooklyn 6, New York.

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CHEMICAL DIVISION

Fishscrap, dom., menhaden, dried, 60% protein, grd., bgs., Atlantic and Gulf coasts, ton. 114.00 -116.00

Fleaseed (see Psyllium seed).

Folic acid, USP, bots., fib. dms., kilo lots or more, gram .25 • —

10% feed grade, fib dms., 3 kilos or more, kilo. 30.00 -44.00

Formaldehyde, 37% (inhibited, 12 to 15% methanol), USP, dms., c.l., dlvd lb. .0690- —
tanks, dlvd. lb. .0430- —

37% (inhibited, 7% methanol) tanks, dlvd lb. .0405- —

44% (1% methanol), tanks lb. .0446- —

37%, methanol-free (uninhibited), tanks, dlvd lb. .0375- —

Formic acid, 85%, cbys., c.l., works, lb. .1570- —
cbys., l.c.l., works lb. .1620- .1720
90%, cbys., c.l., works lb. .1625- —
cbys., l.c.l., works lb. .1675- .1775

Fringetree bark, bls lb. .65 .70

Fumaric acid, tech., 250-lb. dms., c.l., frt. equald lb. .23¼- —
dms., l.c.l., frt equald lb. .24¾- —

Fumaric acid in bags ½c. per lb less.

Furfural, dms., c.l., works lb. .13 • —
dms., l.c.l., works lb. .14 • —
tanks, dvd. E lb. .11½- —
tanks, dlvd. W lb. .12½- —

Furfuryl alcohol, cns., works lb. .28 • —
dms., c.l., t.l., Newark, N. J lb. .19½- —
dms., l.c.l., t.l., Newark, N. J lb. .20½- —
dms., c.l., t.l., Memphis, Tenn lb. .18 • —
dms., l.c.l., t.l.l., Memphis, Tenn. lb. .19 • —
tanks, dlvd. E. of Denver lb. .175 • —

Fusel oil, refd, dms., c.l., dlvd lb. .18 • —
dms., l.c.l., dlvd. lb. .19½- —
tanks, dlvd. lb. .15½- —

G

G salt, bbls., frt. alld., 100% basis lb. .73 • —

Gallic acid, NF VII, bbls., 1,000-lb. lots lb 2.00 • —
bbls., smaller lots lb 2.02 • 2.22
Tech., bbls., 1,000-lb. lots lb. 1.78 • —
bbls., smaller lots lb 1.80 • 2.00

Gamma acid, dry grd., bbls., frt. alld lb. 1.75 • —

Gammapicoline (see g-picoline).

Garlic oil, dom., bots. oz. 4.75 • 6.05
Imp., bots. oz. 4.50 • 5.00

Gaultheria oil (see Wintergreen oil).

Gelatin, edible 75 AOAC test, bbls., c.l., dlvd lb. .55 • —
150 AOAC test, bbls., c.l., dlvd. lb. .64 • —
200 AOAC test, bbls., c.l., dlvd. lb. .70 • —
225 AOAC test, bbls., c.l., dlvd. lb. .74 • —
275 AOAC test, bbls., c.l., dlvd. lb. .82 • —

Gelsemium root, bls. lb. .30 • .35

Gentian root, bls. lb. .24 • —
Grd., bbls., bxs. lb. .30 • —
Powd., bbls., bxs. lb. .30 • —

Geraniol, extra, cns., dms. lb. 1.73 • 2.40
Soap grade, dms lb .90 • 1.75
Standard, cns., dms. lb. 1.65 • —
Synthetic, dms lb 1.30 • —

Geranium oil, Algerian, cns. lb. 21.00 -24.00
Bourbon, cns. lb. 11.75 -14.00
Turkish (see Palmarosa oil).

Geranyl acetate, cns lb. 1.90 • 2.70
Synthetic, dms lb. 1.45 • —

Ginger oil, dist., bots. lb. 12.00 -14.00

Ginger oleoresin, NF from African root, bots lb. 4.25 • 5.00
NF from Jamaican root, bots. lb. 7.75 • —

Ginger root, Cochin, bgs. lb. .20 • —
Jamaican, No. 3, bgs. lb. .26 • —
Nigerian, split, bgs lb. .26 • —
Sierra Leone, bgs lb. .33 • —

Glauber's salt (see Sodium sulfate).

Gluconic acid, tech., 50%, dms., c.l., t.l., f.o.b. works lb. .18½- —
dms., l.c.l., f.o.b. works lb. .19 • —
tanks, f.o.b. works lb. .15½- —

Glue, bone, extracted, dry bone, 86 jellygrams, bgs., c.l., dlvd lb. .16 • —
131 jellygrams, bgs., c.l., same basis lb. .16½- —
164 jellygrams, bgs., c.l., same basis lb. .18½- —
191 jellygrams, bgs., c.l., same basis lb. .19½- —
222 jellygrams, bgs., c.l., same basis lb. .21 • —

Glue, green, 40 jellygrams, bgs., c.l., same basis lb. .16 • —
86 jellygrams, bgs., c.l., same basis lb. .16 • —
115 jellygrams, bgs., c.l., same basis lb. .16½- —
133 jellygrams, bgs., c.l., same basis lb. .17½- —
164 jellygrams, bgs., c.l., same basis lb. .18½- —
180 jellygrams, bgs., c.l., same basis lb. .19½- —
200 jellygrams, bgs., c.l., same basis lb. .20½- —

Bone glue, l.c.l., prices 2c. higher.

Glue, hide, 70-94 jellygrams, bgs., c.l., dlvd lb. .18 • —
95-149, bgs., c.l., dlvd lb. .19 • —
122-149, bgs., c.l., same basis lb. .20½- —
150-177, bgs., c.l., same basis lb. .22½- —
178-206, bgs., c.l. same basis lb. .25 • —
207-236, bgs., c.l. same basis lb. .28 • —
237-266, bgs., c.l., same basis lb. .30½- —
267-293, bgs., c.l., same basis lb. .32½- —
299-330, bgs., c.l., same basis lb. .34½- —
331-362, bgs., c.l., same basis lb. .36½- —
363-394, bgs., c.l., same basis lb. .38 • —
395-427, bgs., c.l., same basis lb. .40 • —
428-460, bgs., c.l., same basis lb. .42 • —
461-494, bgs., c.l., same basis lb. .44 • —
495-529, bgs., c.l., same basis lb. .46 • —

Hide glue, l.c.l. prices 2c. higher.

l-Glutamic acid, 99½%, fib. dms., 100-lb. lots, frt. alld lb. 1.80 • —
fib. dms., 25-lb. lots, frt. alld. lb. 1.88 • —

l-Glutamine, bots., 1-9 kilo lots, kilo. 150.00 -300.00
Bots., 50-kilo lots kilo. 100.00 • —
Bots., 500-kilo lots kilo. 75.00 • —

Glycerine, dom., nat., crude, saponification 88%, tanks dlvd. lb. .13 • .13¼
nat., crude, soapiye, 80%, tanks, dlvd. lb. .12 • .12¾
nat., refd., USP, CP, 99%, dms., c.l., dlvd lb. .26⅜- —
dms., l.c.l., dlvd lb. .27⅛- —
tanks, dlvd. lb. .24⅛- —

Dom., nat., refd., USP, CP, 96%, dms., c.l., dlvd lb. .25½- —
dms., l.c.l., dlvd. lb. .26¼- —
tanks, dlvd. lb. .23¾- —

nat., high gravity, dms., c.l., dlvd lb. .26¼- —
dms., l.c.l., dlvd lb. .27 • —
tanks, dlvd. lb. .24½- —

Glycerine, dom., refd., syn., 99.5%, dms., c.l., dlvd lb. .26½- —
dms., l.c.l., dlvd lb. .27¼- —
tanks, dlvd. lb. .24¾- —

Imp., nat., crude, soapiye, 80%, c.i.f. lb. .12 • .12¼

Glycine (see Aminoacetic acid).

Glycerol (see Glycerine).

Glyceryl guaiacolate, 100-lb. fib. dm., dlvd lb. 4.00 • —
25-lb. fib. dm., dlvd. lb. 4.25 • —

Glycolic acid (see Hydroxyacetic acid).

No. 2, 90-95%, bgs., fib. dms., ex whse lb. .29 • .31

Glycolonitrile, 70%, aqueous, dms., c.l., t.l., works lb. .40 • —
dms., l.c.l., same basis lb. .42 • —
tanks, same basis lb. .39 • —

Glyoxal, 30%, dms., c.l., works lb. .20½- —
dms., l.c.l., works lb. .21¼- —
tanks, works lb. .18 • —

Golden seal root, NF, tested, bls. lb. 2.90 • 3.00

Gramicidin, 1 to 5 kilos, f.o.b. works, gram. 4.25 • —

Grapefruit oil, dms lb. 2.40 • 2.60

Graphite, amorp., powd., bgs., fib. dms., ex whse lb. .06 • .09½

Cryst., 88-90% powd., bgs., fib. dms., ex whse lb. .19 • .21½

90-92%, powd., bgs., fib. dms., ex whse lb. .21 • .24½

Cryst., 95-97%, powd., bgs., fib. dms., ex whse lb. .29 • .31½

Flake, No. 1, 90-95%, bgs., fib. dms., ex whse lb. .29 • .31

Grease, white, choice all hog, tanks, dlvd lb. .07¾- —

Yellow, tanks, dlvd lb. .05 • —

Grease oil, No. 1, dms., c.l., f.o.b. Chicago lb. .12 • —
dms., l.c.l., same basis lb. .14 • —
tankcars, same basis lb. .10½- —

extra, winter, strained, dms., c.l., Chicago lb. .15 • —
dms., l.c.l., same basis lb. .17 • —
tankcars, same basis lb. .13½- —

Grease, oil, prime, burning, dms., c.l., same basis, Chicago lb. .17 • —
dms., l.c.l., same basis lb. .19 • —
tankcars, same basis lb. .15½- —

Other areas ¾c. higher, except Texas and West Coast, 1¼c. higher.

GREEN PIGMENTS

Green pigment quotations are listed individually. For example, prices on Green, chrome, may be found in the C's under Chrome green

Grindelia robusta herb, bls. lb. .40 —

Guaiacol, NF, cryst., dms., tins lb 2.10 2.15
liq., cbys., dms lb. 2.30 • 2.40

Guaiacwood oil, cns lb. .65 .80

Guaiacol carbonate, NF VII, dms lb 3.40 3.45

Guar gum, edible, bgs., c.l., f.o.b. shipt. pt lb. .38 • —
bgs., l.c.l. same basis lb. .40 • .42

Indust., bgs., c.l., same basis lb. .32 • —

Tech., bgs., c.l., same basis lb. .30 • —

GUMS

Gum quotations are listed individually. For example, prices on Gum, Dammar, may be found in the D's under Dammar gum.

H

H acid, dry, bbls. c.l., frt. alld., 100% basis lb. 1.00 • —
bbls., l.c.l., same basis lb. 1.05 • —

Hansa yellow 10 G, bbls., dlvd. E. of Rockies lb 2.45 —

Hansa G yellow, pigment, bbls lb 2.20 —

Hawthorn berries, bgs lb 18 .20

Heliotropin, 100-lb lots, dms. lb 2.60 3.40

Hellebore root, dom., green, bls lb 70 75

Helonias root, bls lb 1.50 —

Hemlock oil, cns lb. 2.55 3.00

Henbane leaves, bls lb. .40 45

Heptachlor, dms, c.l., t.l., frt. alld., 100% basis lb. .96 —

Heptane, indust., tankcars, New Jersey and New York gal. .20 —
Houston, Texas gal. .1625 —

Hesperidin, purif., 50 kilos, f.o.b. works kilo. 19.70 —

Hesperidin methylchalcone, 50 kilos, f.o.b. works kilo. 49.25 • —

Hexachlorophene, dms., 1,100 lbs. or more lb. 1.84 —
dms., to 1,100 lbs lb. 1.94 —

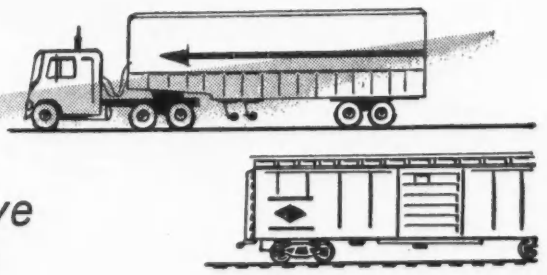
Hexalin (see Cyclohexanol)

Hexamethylenetetramine, tech., bgs., 20,000-lb lots or more, Perth Amboy or New York City lb. .233 —
bgs., 1,000-19,999-lb. lots, same basis lb. .243 —
bgs., smaller lots, same basis lb. .253 —
fib. dms., 1,000-lb. lots or more, same basis lb. .250 • —
fib dms., smaller lots, same basis lb. .253 —

USP, bgs, 500 lbs. or more, f.o.b. Fords, N. J., dlvd. New York City and Philadelphia lb. .42½- —
bgs., smaller lots, same basis lb. .43½- 48¼

ORONITE®

MIXED SHIPMENTS



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Isophthalic
Fumaric Acid*

Oronite—one of the world's fastest growing producers of important dibasic intermediates—announces the availability of mixed truck or freight car shipments of Phthalic Anhydride, Maleic Anhydride, Isophthalic and Fumaric* acid. This particular service could effect savings on your requirements for these products. All are, or soon will be, available from convenient warehouse terminals close to major centers of industry. Maleic can be delivered in either molten or briquet form.

Talk over your requirements with Oronite—find out how this new Oronite program can benefit you.

PHENOL and **ACETONE.** These Oronite products are available from convenient bulk terminals located in the East, Midwest and on the Pacific Coast.

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ORONITE DIVISION

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NITROPARAFFINS DEPARTMENT

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SUBJECT:	Hydroxylamine Salts	DESCRIPTION:	Versatile nitroparaffin derivatives with unlimited application possibilities
ACTION DESIRED:	Consider them for synthesis, purification, for your research projects		

Hydroxylamine salts have reactivity characteristics possessed by no other chemical. Industry is now using these versatile nitroparaffin derivatives in ever increasing quantities, and new applications are continually being discovered. As reducing agents, oxidizing agents —for synthesis, purification and biological systems— hydroxylamine salts offer you unlimited opportunity in research and product development.

Oxidation—reduction.

Hydroxylamine salts are well-known reducing agents for metal ions such as ferric, cupric, and silver, and also for non-metallics such as organic peroxides and certain dyes. Because of this property, these salts have found industrial applications in dyeing, purification, and refining processes. The salts are very stable in acidic media, a property not possessed by many reducing agents.

Less well known, however, is the action of hydroxylamine as an oxidizing agent. This property has received little study, but it warrants your further investigation —particularly where oxidizing agents now used are not fully satisfactory.

For dyeing synthetic fibers.

Hydroxylamine sulphate is an ideal reducing agent in the cuprous ion method for dyeing synthetic fibers. One step in the process is the reduction of the cupric ion to the cuprous form, and hydroxylamine sulfate is reported to act as a reservoir for the cuprous ion as it is formed, thus avoiding precipitation of metallic copper which would result in dull colors. (It has also been reported that hydroxylamine acts directly on the fibers and makes them more easily dyed by direct wool dyes. It is possible that this process will soon displace the cuprous ion method when it has been more thoroughly evaluated.)

Shortstopper for synthetic rubbers.

The sulfate and chloride salts of hydroxylamine are used as non-discoloring shortstoppers in the production of butadiene-styrene rubber, GR-N-type synthetic rubber, and other polymers. In this use the hydroxylamine is added to inhibit further polymerization when the reaction has reached the desired conversion. The result, when hydroxylamine is used, is rubber with better color.

And reports from users indicate that CSC hydroxylamine salts have been, and are now being used, with *both* hot and cold polymerizations. What's more, their use is *not* confined to specialty rubbers, but they are also being used successfully with all-purpose synthetic rubber of the styrene-butadiene type.

The principal reason behind the increased use of hydroxylamine is the better color it produces in rubbers as compared with hydroquinone-stopped synthetics.

For synthesis.

The hydroxylamines are valuable for chemical synthesis of oximes, hydroxamic acids, and numerous intermediates—also for preparation of anti-skinning agents,

Physical Properties	HYDROXYLAMMONIUM ACID SULFATE	HYDROXYLAMMONIUM SULFATE	HYDROXYLAMMONIUM CHLORIDE
Formula	$NH_2OH \cdot H_2SO_4$	$(NH_2OH)_2 \cdot H_2SO_4$	$NH_2OH \cdot HCl$
Molecular Weight	131.11	164.14	69.50
Melting Point, °C	Indefinite	177*	152*
pH of 0.1M Aqueous Solution at 25°C	1.6	3.7	3.4
Solubility at 25°C, g/100 g solvent			
In Water	Approx. 390	63.9	94.7
In 95% Ethanol	4.3	0.2	10.5
In Methanol	20.2	0.1	17.5

*Melts with decomposition.

anti-rusting agents, and pharmaceuticals. For example, hydroxylamine reacts readily with aldehydes and ketones to give high yields of oximes which are useful in a variety of applications, including the preparation of antioxidants and stabilizers. When added to inks and paint, oximes are useful as anti-skinning agents.

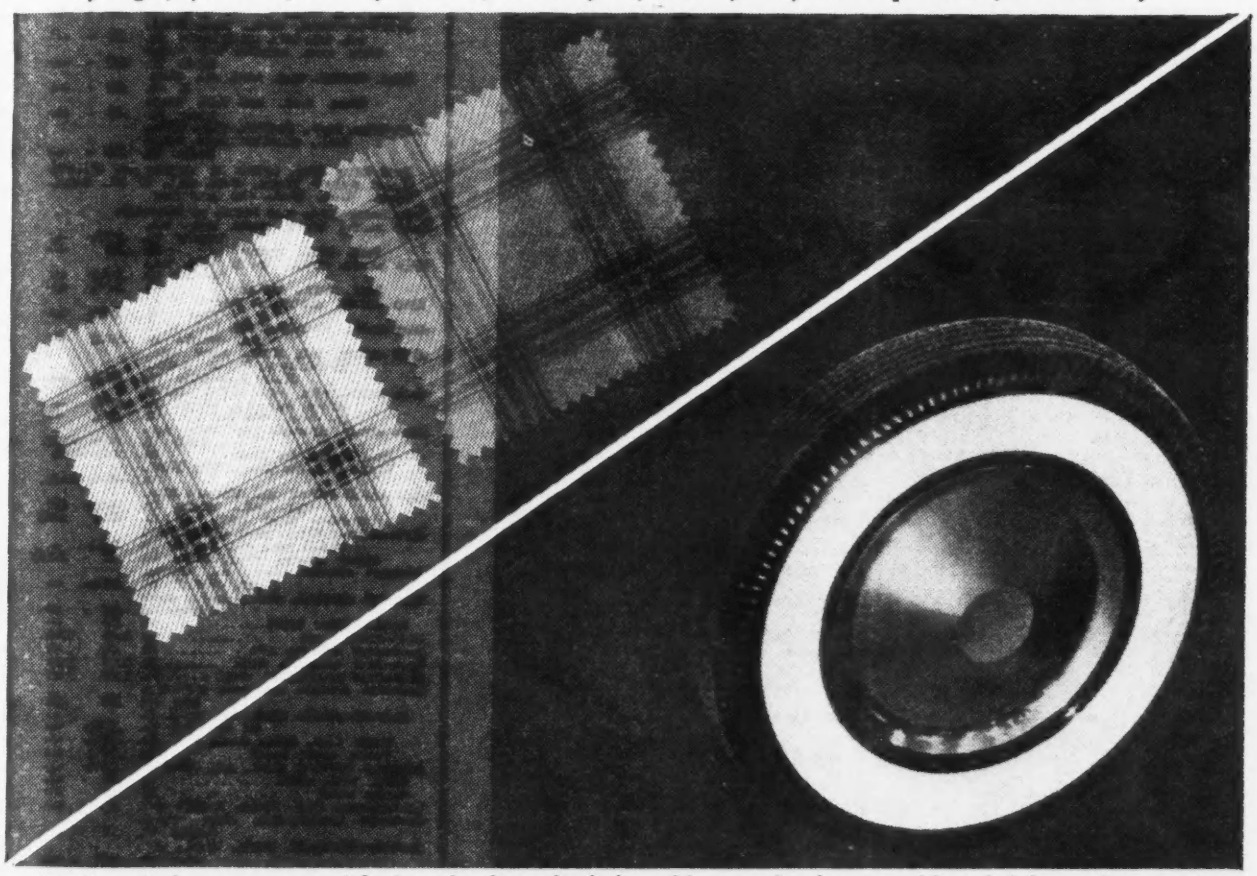
Effects on proteins and biological systems.

Hydroxylamines inhibit certain enzymes, such as catalase. Gelatin treated with hydroxylamine shows considerable resistance to acid etching. It also inhibits bacterial growth, and many of its derivatives have fungicidal properties. And hydroxamic acid, prepared from hydroxylamine, possesses interesting pharmacological activity.

Can hydroxylamines help you explore new fields within your field?

Most probably the answer is "yes." With their unique properties and wide range of utility—plus the fact that they are now available in commercial quantities at moderate prices—hydroxylamines possess unlimited potential. They offer you unlimited research and product development opportunity.

There is a difference in color when synthetic fiber (on left) is treated with hydroxylamine during dyeing. Dyeing of synthetic fibers is just one of the many ways that hydroxylamines prove useful to industry.



Another of the many uses of hydroxylamine salts is in rubber production to achieve brighter, clearer color.

HYDROXYLAMINES

For samples and complete technical data, fill out coupon below and mail today.

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CSC

_____ Please send me complete technical data on hydroxylamines.

_____ Please send me samples for test purposes.

*Name*_____ *Title*_____

*Company*_____ *Address*_____

*City*_____ *Zone*____ *State*_____

*Application I have in mind*_____

Hexane—Isopropyl Ether

Hexane, industrial, tankcars, New Jersey and New York gal. .20 • —
Houston Texas gal. .16 • —
1-Hexanol, dms., c.l., works lb. .35 • —
dms., l.c.l., works lb. .35¾- —
tanks works lb .33 — —
Hexyl cinnamic aldehyde, dms lb. 3.95 • 4.00
n-Hexyl methacrylate, dms., c.l., works lb. .75½- —
dms. l.c.l. works lb. .76 — —
Hexyl salicylate dms. lb. 1.70 • 1.85
Hexylene glycol, dms., c.l., dlvd lb. .17½- —
dms., l.c.l., dlvd lb. .19 • —
tanks, dlvd lb. .15 • —
Hexylresorcinol, USP, dms., 25-lb. lots or more dlvd lb.14.00 • —
dms. smaller lots, dlvd lb.14.50 • —
Homatropine hydrobromide, USP, bots oz. 3.25 • —
methylbromide, USP, bots oz. 3.00 • —
Hoofmeal, 17-18% ammonia, bulk, c.l. Chicago unit-ton 6.75 — —
Horehound herb, bls. lb. .18 • .20
Hydrastis (see Goldenseal.)
Hydrazine hydrate, 85%, 240-lb. dms., c.l., works lb. 1.28 • —
240-lb. dms., l.c.l., works lb. 1.35 • 1.55
Hydriodic acid, purif., 47%, 2-cbys., f.o.b. works lb. 2.92 • —
Hydroabietyl alcohol, tech., solid, dms., c.l., dlvd, zone 1 lb. .29¼- —
dms., l.c.l., dlvd, zone 1 lb. .29¾- .30¼
tanks, dlvd, zone 1 lb. .27¼- —

Zone 1 for hydroabietyl alcohol comprises all of continental US except Ariz., Calif., Colo., Idaho, Mont., Nev., N. M., Ore., Utah, Wash., Wyo., and the western part of Texas.

Hydrobromic acid, medicinal, 48%, cbys., frt. equald lb. .48 • .56
Hydrochloric acid, anhyd. (see Hydrogen chloride.)
Hydrochloric acid, CP, USP, consumers, cbys, extra, c.l., works lb. .15¾- —
cbys, l.c.l., same basis lb. .17¼- .17¾
5-pint bots., extra cs, c.l., same basis lb. .20¾- —
Hydrochloride acid, 18°, cbys., c.l., works 100 lbs. 2.50 • —
cbys., l.c.l., dlvd. Metropolitan area 100 lbs. 2.90 • 3.00
tanks, works, frt. equald ton.28.00 • —
20°, cbys., c.l., works 100 lbs. 2.75 • —
cbys., l.c.l., dlvd. Metropolitan area 100 lbs. 3.15 • —
20°, tanks, works, frt. equald ton.30.00 • —
22°, cbys., c.l., works 100 lbs. 3.25 • —
cbys., l.c.l., dlvd. Metropolitan area 100 lbs. 3.65 • —
tanks, works, frt. equald ton.35.00 • —
Hydrocortisone acetate, bulk, bots., kilo lots or more gram. .85 • .90
Hydrocortisone alcohol, bulk, bots., kilo lots or more gram. 1.00 • 1.90
Hydrocyanic acid, dilute, NF, 2%, 5-pint bots., f.o.b. works, pint. .70 • —
Hydrofluoric acid, anhyd. (see Hydrogen fluoride)
Hydrofluoric acid, aqueous, 70%, 55-gal. or 30-gal dms., c.l., t.l., dlvd. 100 lbs.17.25 • —
Hydrofluoric acid, aqueous, 70%, 55-gal. dms., l.c.l., t.t.l., dlvd. 100 lbs.18.75 • —
20-gal. dms., c.l., t.l., dlvd 100 lbs.19.00 • —
20-gal., dms., l.c.l., l.t.l., dlvd. 100 lbs.20.50 • —
tanks, works frt. equald 100 lbs.11.50 • —

Delivered prices apply to all states east of Arizona, California, Colorado, Idaho, Montana, Nevada, New Mexico, Oregon, Washington and Wyoming. In those states add $2.75 per cwt. for drum delivery

Hydrofluosilicic acid, dms., works, 30% basis lb. .07 • —
Hydrofluramide dms. fib ctns., works lb. .30 • .40
50-lb cyls. l.c.l., works lb. .55 • .60
Hydrogen chloride anhyd., 50-lb. cyls. l.c.l. works lb. .45 • —
Hydrogen cyanide liq., 98% tanks, works lb. .13 • —
Hydrogen fluoride, anhyd., cyls., dlvd. E lb. .29 • .31
cyls., dlvd. W lb. .37 • —
tanks, works lb. .16 • —
Hydrogen peroxide 35% dms., c.l., dlvd lb. .202 • —
dms., l.c.l., dlvd. lb. .211 • —
tanks, dlvd. lb. .1800- —
Hydroquinone, photo grade, dms., 50-lbs. f.o.b works lb. 1.10 • —
Tech., dms., c.l., dlvd. lb. .82½- —
dms. l.c.l. dlvd lb. .84½- —
Hydroquinone monomethyl ether, dms., t.l. dlvd lb 2.59 • —
dms., t.t.l., dlvd. lb. 2.61 • —
Hydroxyacetic acid, tech., 70% dms. Philadelphia and Chicago lb. .11 • —
tanks, Belle W Va. lb. .073 • —
Hydroxycitronellal, cns. lb. 5.65 • 6.00
Hydroxyethyl cellulose, fib. dms., 20,000-lb. lots or more, f.o.b. shipping point lb. .69 • —
fib. dms. 2,000 to 19,999-lb. lots, same basis lb. .77 • —
Hydroxyethyl cellulose, fib., dms., 100 to 1,999-lb. lots, basis lb. .81 • —
fib. dms., smaller lots, same lb. 1.01 • —
Hyoscine salts (see Scopolamine)
Hyoscyamine hydrobromide, bots. oz. 7.75 • 8.50
Hyoscyamine sulfate, bots oz. 7.75 • 8.50
Hypophosphorous acid, purif., 50%, 10-cbys. f.o.b works lb. 1.95 • —
NF 50% 10-cbys., same basis lb. 1.35 • —

I

Ichthammol, NF, dms. lb. .75 • 1.05
Indigo (see Dyes, Coaltar, 1171 indigo, syn.).
Indole, CP, bots lb.13.65 • 15.00
Inositol, 50-100 lb. dms., 1,000 lbs. or more, dlvd lb. 4.50 • —
50-lb. dms., less than 1,000 lb., dlvd lb. 4.75 • —
10 lb. cns., 10-50 lbs., dlvd. lb. 5.00 • —
5 lb. bots., dlvd. lb. 5.25 • —
Insect flowers (see Pyrethrum).
Iodine, crude, kgs. lb. 1.10 • —
Resub., USP, dms., f.o.b. works. lb. 2.20 • 2.22
Iodochlorohydroquinolin, USP, dms. lb. 3.60 • —
Iodoform, NF, dms., 300-lbs., fo.b. works lb. 4.90 • —
dms., 100-lb., same basis lb. 5.05 • —
a-Ionone, cns. lb. 4.60 • 5.75
b-Ionone, cns. lb. 4.15 • 6.15
Ipecac root, whole, bgs. lb. 7.75 • 8.00
Powd., bbls., bxs. lb. 9.00 • 9.25
Irish moss, bleached, prime, bls lb. .35 • —
Iron blue, alkali-resisting, bbls., c.l., dlvd. E lb. .60 • —
bbls., l.c.l. ton lots, same basis. lb. .61 • —
bbls., smaller lots, same basis. lb. .62 • —
Dom., reg. bbls., c.l., dlvd. E lb. .55 • —
alkali-resistant, dom., reg., bbls., c.l., ton lots, same basis lb. .56 • —
bbls. l.c.l., smaller lots, same basis lb. .57 • —
Imp., British, reg., bbls. c.l. dlvd. E lb. .48 • —
bbls., l.c.l., ton lots, same basis lb. .49 • —
Iron blue, imp., British, reg., bbls., l.c.l., smaller lots, same basis lb. .50 • —

Iron blue dlvd. prices le nigher for Pacific Coast states: Wash., Ore., Cal., N M., Ariz., Mont., Wyo., Utah, Col. and Nev.

Iron compounds (see Ferric or Ferrous).
Iron oxide, black, pure, bgs., c.l., works lb. .14¾- —
bgs., l.c.l., works lb. .15 —
Iron oxide, brown, pure, bgs., c.l., works lb. .14¼- —
bgs., l.c.l., works lb. .14½- —
Iron oxide, metallic, brown, bgs., works lb. .05½- —
Iron oxide, Persian Gulf, red., bgs., c.l., works lb. .08¾- —
Iron oxide, red, dom., pure bgs., Bethlehem, E. St. Louis, New York City lb. .14¼- —
Iron oxide, red, nat., 75-85% ferric oxide, bgs., c.l., works lb. .06¼- —
bgs., l.c.l., works lb. .06½- —
Iron oxide, Spanish red, bbls., c.l., ex dock lb. .05¾ Nom.
bbls., l.c.l., ex dock lb. .06 Nom.
bbls., l.c.l., ex whse, New York. lb. .06½ Nom.
Iron oxide, yellow, nat., French type, bgs., c.l., works lb. .06¾- .07
Peruvian type, bgs., l.c.l lb. .023 .024
Iron oxide, yellow, pure, light lemon shade, bgs., c.l., works lb. .12¼- —
other shades, same basis lb. .12 • .12½
Isoamyl alcohol, dms., c.l., works, frt. alld E lb. .27½- —
Isoamyl alcohol, dms., l.c.l., same basis lb. .29 • —
tanks, same basis lb. .25 — —
Isoborneol cns. lb. 1.44 • 1.80
Isobornyl acetate, cns. lb. .46 .56
Isobornyl formate, dms lb. 1.15 • 1.20
Isobornyl propionate, dms lb. 1.20 • 1.25
Isobutyl acetate, perfume grade, cns lb. .30 .35
Solvent grade, dms., c.l., dlvd. E. of Rockies lb. .15¼- —
dms., l.c.l., same basis lb. .16¾- —
tanks, same basis lb. .12¾- —
Isobutyl alcohol, dms., c.l., dlvd lb. .15½- —
dms., l.c.l., dlvd. lb. .17 • —
tanks, dlvd lb. .13 • —
Isobutylene, 99%, tanks, works gal. .38 • —
Isobutyl isobutyrate, dms., f.o.b. works lb. .75 • —
Isobutyraldehyde, tech., dms., c.l., dlvd lb. .22 • —
dms., l.c.l., dlvd. lb. .23½- —
tanks, dlvd. lb. .19½- —
Isobutyric acid, dms., c.l., t.l., dlvd. lb. .35 — —
dms., l.c.l., l.t.l., same basis lb. .36½- —
t.c. t.t., same basis lb. .33 — —
Isobutyronitrile, d.ns., c.l., dlvd. lb. .47½- —
dms., l.c.l., dlvd lb. .48½- —
tanks, dlvd. lb. .45 • —
Isoeugenol, cns. lb. 3.10 3.40
Isoniazid, powd., bulk, 50 kilos kilo.12.00 —
Isonicotinic acid, 100-lb fib. dms., works lb. 4.25 • —
Isonicotinic acid hydrazide (see Isoniazid).
Iso-octyl alcohol, dms., c.l., dlvd. E. lb. .20½- —
dms., l.c.l., dlvd. E lb. .22 • —
tanks, dlvd. E lb. .18 • —
Iso-octyl isodecyl phthalate, dms., c.l., frt. alld. E lb. .25½- —
dms., l.c.l., frt. alld. E lb. .27 • —
tanktrucks, 1,000 - 1,999 gals., same basis lb. .23½- —
tanktrucks, 2,000 gals., same basis lb. .23 • —
Isopentane, comi. grade, tanks, f.o.b. Texas refy gal. .16½- —
Isophorone, dms., c.l., dlvd. lb. .25 • —
dms., l.c.l., dlvd. lb. .26½- —
tanks, dlvd lb. .22½- —
Isophthalic acid, dms., c.l., works, frt. equald lb. .14½- —
dms., l.c.l., same basis lb. .15½- —
Isopropanol (see Isopropyl alcohol).
Isopropyl acetate, dms., c.l., dlvd. lb. .14 • —
dms. l.c.l., same basis lb. .15½- —
tanks, same basis lb. .11½- —
Isopropyl alcohol, refd., 91%, dms., c.l., dlvd gal. .58 • —
dms., l.c.l., dlvd. gal. .68 • —
tanks, dlvd. gal. .42 • —
Isopropyl alcohol, 95%, c.l., dms., dlvd gal. .60 • —
dms., l.c.l., dlvd. gal. .70 • —
tanks, dlvd. gal. .44 • —
Anhyd., c.l., dlvd gal. .62 • —
dms., l.c.l., dlvd. gal. .72 • —
tanks, dlvd gal. .46 • —
Isopropyl benzene (see Cumene)
Isopropyl ether, dms., c.l., dlvd lb. .09½- —
dms l.c.l dlvd. lb .11 • —
tanks, dlvd. lb. .07 • —

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dms., l.c.l., works lb. 1.05 - 1.25
tanks, works lb. .99 - —
Isopropylamine (see Mono, Di, or Tri-).
Isopropyl-N-phenyl carbamate, 450-lb. fib. dms., c.l., t.l., works lb. .75 - —
450-lb. fib. dms., l.c.l., works lb. .80 - .90
Isoquinoline, dms., works lb. .65 1.25
Itaconic acid, refd. bgs. c.l., f.o.b. works lb. .39½- —
bgs., l.c.l., same basis lb. .41 - .43
Tech., bgs., c.l., same basis lb. .34½- —
bgs., 500-lbs. same basis lb. .36 - —

J

J acid, paste, bbls., works, 100% basis lb. 2.70 - —
Powd., bbls., same basis lb. 2.75 - —
Jalap root, NF, bls lb. .55 - .60
NF, powd., bbls., bxs lb. .65 - .70
Japan wax, cs. lb. .29 - .31
Juniper berries, bgs. lb. .25 - .30
Juniper berry oil, NF, bots. lb. 2.90 - 3.75
Twice rectified, bots. lb. 3.25 - —
Juniper tar oil, NF, dms. lb. .42 - .60
Juniper wood oil, tech. cns. lb. .38 - .55

K

Kaolin (see also Clay, China).
Kaolin NF, powd., fib. dms lb. .10 - .12
NF colloidal 50-lb. bgs. lb. .15½ - .17½
Karaya gum No 1, NF powd., bls lb. .48 - .50
No. 2, powd. bbls. lb. .43 - .45
No. 3, powd. bbls. lb. .37 - .40
Koch acid bbls., frt. alld., 100% basis lb. 1.00 - —
Kola nuts, bgs. lb. .11 - .12

L

L acid, bbls., works lb. 1.25 - —
Lacquer diluent petroleum, 140°F. 200°F b.r., tankcars, New Jersey and New York gal. .20 - —
Group 3 gal. .15125- —
Houston, Texas gal. .16 —
200°F-240°F b.r., tankcars, New Jersey or New York gal. .20 - —
Group 3 gal. .14125 —
Houston, Texas gal. .16 —
Lactic acid, food processing, 50%, dms., c.l., t.l., dlvd. N.Y., Phila lb. .1986- —
dms. 20 or more, same basis. lb. .2036- —
dms., 5 to 19, same basis lb. .2086- —
dms., 1 to 4, same basis lb. .2136- —
80%, c.l., dms., same basis lb. .3336- —
dms., 20 or more, same basis. lb. .3386- —
dms., 5 to 19, same basis lb. .3436- —
dms., 1 to 4, same basis lb. .3486- —
Plastic grade, 50% c.l., bbls., works lb. .2740- —
bbls., 20 or more, works lb. .2790- —
bbls. 5 to 19 works lb. .2840- —
bbls., 1 to 4, works lb. .2890- —
Plastic grade, 80% bbls., c.l., works lb. .4625- —
bbls. 5 to 19 works lb. .4725- —
bbls. 1 to 4 works lb. .4775- —
Tech., 44%, bbls., c.l., works. 100 lbs. 12.45 - —
bbls., l.c.l., works 100 lbs. 12.85 - —
USP, 85% chys lb. .85 - —
Lactose, crystalline, edible, bgs., 23,000-lb lots, frt. equald lb. .14 - —
bgs., 6,000-lb lots, frt equald lb. .14½- —
bgs., 2,000-lb lots, frt equald lb. .14¾- —
bgs., 200-lb lots, frt equald lb 15¼- —
Edible lactose in fib dms. ½c higher
Lactose, ferment, grade, bgs., c.l., works lb. .08¾- —
USP, reg., fib. dms., 30,000-lb. lots, frt. equald lb. .21½- —
fib. dms., 2,000-lb lots, frt. equald lb. .22¼- —
200-1,880-lb. lots, frt. equald lb. .22¾- —
USP lactose in bags ½c to 1c lower
Lactose, USP, spray dried, bgs., t.l., frt. equald lb. .18½- —
bgs., t.t.l., frt equald lb. 19 .19¾
Lady's slipper root, bls. lb. 3.50 - —
Lamp black, bgs. c.l., works lb. .16 .45
Lanolin, USP, anhyd. 400-lb dms., works lb. .24 - .28
USP, annyd., cosmetic, 400-lb. dms., works lb. .26 - .30
USP, hydrous, 400-lb dms., works. lb. .20 - —
Lard, cash, dms., Chicago lb. .08¼- —
Lard oil (see Grease oil).
Larkspur seed, bgs. lb. .55 - —
Laurel leaf oil, dms, cns lb 9.75 -12.50
Laurent's acid, bbls lb. .87 - —
Lauric acid, pure, dms lb. .30¼- .32¾
bags lb. .28¾- .31¼
tanks lb. .27¾- —
Lauryl alcohol, bots lb. 2.00 2.50
n-Lauryl methacrylate, dms., c.l., t.l., works lb. .65¼- —
dms, t.t.l., works lb. 66 - —
Lavandin oil, 22-24%, dms. lb. 1.15 - —
Abrial, dms. lb. 1.20 - —
Lavender flowers, medium, bls lb. .55 - .60
Ord., bls lb. .20 - .25
Select., bls lb. .90 1.00
Lavender flower oil, USP, French, 35-37% ester, cns lb. 1.85 4.00
40-42% ester, cns. lb. 3.50 - 3.65
Spike, Spanish, cns lb. 1.75 - 2.00
Lead acetate, NF, cryst., gran., powd., bbls lb. .34½- —
White, cryst., bbls. lb. .25½- —
gran., bbls. lb. .26½- —
powd. bbls lb. .26½- —
Lead arsenate, acid powder, dealers, 3-50-lb. bgs. or any quantity frt. alld on $150 or more lb. .30½- —
1-lb bgs., same basis lb. .47 - —
Lead, blue, basic sulfate, bbls., c.l., shipt point, frt. alld lb. .17 - —
bbls., l.c.l., same basis lb. .18 - —
Lead carbonate (see Lead, white, basic carbonate)
Lead chloride, 400-lb. fib. dms. lb. .56 - —
Lead iodide, NF V ars lb. 3.82 - —
Lead linoleate, fused, 24% liq. Pb, dms lb. .21¼- —
Lead metal, prime, pigs, New York lb. .10½- —
St. Louis lb. .1030- —
Lead monosilicate, bgs., c.l., works, frt equald lb. .1385- —
bgs., l.c.l., same basis lb. .1485- —
Lead naphthenate, liq., 16% Pb., dms., dlvd lb. .19½- —
24% Pb. dms., dlvd lb. .24¼- —
Solid, 47% Pb., dms. dlvd lb. .31¾- —
Lead nitrate, tech., cryst., 400-lb. fib. dms lb. .2675- —
Lead orthosilicate gel., 50-60% PbO, dms. works lb. .29¾ .34¼
Lead peroxide, tech. powd., bbls lb. .45 - .50
Lead phthalate, dibasic, dms., works lb. .61 - —
Lead, red, 95% Pb_3O_4 or less, bbls., c.l., works, frt. equald. lb. .1325- —
bbls., l.c.l., same basis lb. .1425- —
97%, Pb_3O_4 or less, bbls., same basis lb. .1345- —
bbls., l.c.l., same basis lb. .1445- —
Lead, red, 98%Pb_3O_4, bls., c.l., same basis lb. .1360- —
bbls., l.c.l., same basis lb. .1460- —
Lead, resinate, precip., 23%Pb, dms., lb. .49 - —
Lead salicylate, normal dms. works lb. .48 —
Lead silicate (see Lead white basic silicate).
Lead silicochromate, bgs., c.l., f.o.b. mfrs. point, frt. alld lb. .20 - —
bgs., l.c.l., same basis lb. .21 - —
Lead sulfate (see Lead blue basic sulfate).
Lead tallate, liq., 16% Pb, dms lb. .17¼- —
24% Pb, dms lb. .21¼- —
Solid, 30% Pb, dms lb. .26¾- —
Lead white, basic carbonate, bgs., c.l., shipt pt., frt. alld lb. .18 - —
bgs. l.c.l., same basis lb. .19 - —
Basic silicate, bgs., c.l., shipt. pt., frt. alld lb. .16½- —
bgs., l.c.l., same basis lb. .17½- —
Lecithin, edible, tech., bleached, non-ret. dms., c.l., works, lb. .14 - .15
non-ret. dms., l.c.l., same basis lb. .15 - .16
Lecethin, edible, tech., unbleached, non-ret. dms., c.l., same basis lb. .13 - .14
non-ret. dms., l.c.l., same basis lb. .14 - .15
Lemon bioflavonoid complex, 50 kilos, f.o.b. works kilo. 14.20 - —
Lemon oil, USP, Calif., cns., dms. lb. 2.45 - 3.75
Messina, cns lb. 4.00 - 6.50
Lemongrass oil, cns., dms lb. 4.00 - —
dl-Leucine, dms., 1 kilo, works kilo. 50.90 - —
Licorice root, gran., bls. lb. .13 - —
Powd. bls. lb. .15 - .16
Whole, bls. lb. .09 - .10
Lignaloe wood oil, Mexican, cns lb. 2.75 - 3.50
Lignosulfonate (see under Ammonium or Sodium lignin sulfonate)
Lilac oil lb. 1,500.00
Lime, chemical (quicklime), bulk, c.l., 50,000 lbs. works, E. ton. 14.25 - —
Chemical, hydrated, bgs., c.l., same basis ton. 17.25 - —
spray, bgs., c.l. same basis ton. 18.25 - —
For New York delivery, add $6.29 freight charge
Lime oil, dist., Mexican, dms. lb. 5.25 - 6.00
West Indian, dms. lb. 5.25 - 6.00
Expressed, West Indian, dms lb. 6.50 - 7.75
Lime salts (see Calcium).
Lime-ammonium nitrogen, 20.5% N (see Ammonium nitrate with dolomite).
Linalool, ex bois de rose oil, dms. lb. 2.45 4.25
Syn., 98-100%, dms., works lb. 3.20 - —
Linalyl acetate, ex bois de rose, 90-92%, dms lb. 2.65 - 4.50
96-98%, dms. lb 3.25 - —
Syn., 98-100%, dms., works lb. 3.20 - —
Lindane, 25% formulation, to distributors, dms, frt alld lb. 1.35 1.50
99%, tech, to formulators, 250-lb. dms., 5,000 lbs., dlvd lb. 2.13 - —
100-lb dms, 5,000-lbs. dlvd lb 2.15 - —
250-lb dms, less than 5,000 lbs., dlvd lb 2.18 - —
100-lb dms, less than 5,000 lbs. dlvd lb 2.20 —
Linden flowers, with leaves bls lb 35 40
Without leaves bls lb 42 45
Linseed meal, expeller, 32%, bulk, Minneapolis, mills ton. 61.50 - —
Extracted, 34%, bulk, same basis ton. 56.50 - —
Linseed oil, raw, dms., c.l., New York lb. .1880- —
Linseed oil, raw, dms., l.c.l., New York lb. .2080- —
tanks, f.o.b. Minneapolis lb. .1520- —
tanks, New York lb. .1628- —
tankwagon, New York lb. .1653- —
Boiled linseed oil, 006c per lb higher.
Linseed oil acid, dist., dms. lb. .22½- .25
tanks lb. .20 - —
water-white, dms. lb. .27¼- .29¾
tanks lb. .24¾- —
Litharge, comi., powd., bbls., c.l., works, frt. equald lb. .1275- —
bbls., l.c.l., same basis lb. .1375- —
Lithium aluminum, hydride, lump, dms., works lb. 33.00 39.00
Lithium benzoate dms. lb. 1.65 1.67
Lithium bromide, NF, gran., bgs., works, frt. equald lb. 2.60 - —

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Lithium carbonate, NF, dms., ton lots lb. .58 - —
dms., 1,999 lbs. or less lb. .64 - —
Tech., dms., ton lots lb. .57 - —
dms., 1,999 lbs. or less lb. .63 - —
Lithium chloride CP, anhyd., dms., ton lots lb. 1.23½- —
Tech. anhyd. dms., c.l., t.l., dlvd. or works, frt alld lb. .87 - —
dms. l.c.l. same basis lb. .88 - .92
Lithium citrate NF, dms. ton lots, lb 1.50 - —
Lithium fluoride, dms., 20,000-lb. lots, dlvd lb. 1.75 - —
bbls., ton lots and more, dlvd lb 1.85 - —
bbls., less ton lots, dlvd lb 1.90 - —
Lithium hydride, powd., dms., 500-lbs lots or more works, lb. 9.50 - —
Lithium hydroxide, monohydrate, dms., c.l., t.l., frt. alld lb. .54 - —
dms., l.c.l., frt. alld. lb. .58 - —
Lithium manganite, dms. works lb .95 1.05
Lithium nitrate, tech. dms., 100-lb lots lb 1.15 1.25
Lithium salicylate dms. lb 1.60 1.70
Lithium silicate dms., works lb 1.10 1.20
Lithium stearate, dms. c.l. works, lb. 47½- —
dms. ton lots works lb. 48¼- —
dms. less-ton lots. works lb 53½- —
Lithium sulfate dms. 100-lb lots, lb 1.15 1.25
Lithium titanate, dms., works lb 1.15 1.25
Lithol red toner barium, bbls., works lb. 1.03 - —
Lithol-rubine red toner pure, bbls., works lb. 1.65 - —
Resinated, bbls., works lb. 1.47 - —
* Lithopone ord. bgs. c.l. dlvd E. lb. .08½- —
bgs. l.c.l. dlvd E lb. .09½- —
Titanated (high-strength), bgs., c.l., dlvd lb. .11 —
bgs. l.c.l. dlvd lb. .12 —
Lobelia herb, bls lb. .80 - —
Lobeline sulfate bots. 50-oz. lots, works oz. 30.00 —
Locust bean gum powd. bgs lb .35 .46
Lycododium, cs. lb 2.50 3.00
1-Lysine monohydrochloride, 25-lb. dms lb. 4.50 - —

M

Mace, Siauw, No. 1, bls lb. 1.25 - —
No. 2, whole, bls lb. 1.15 - —
siftings, bls. lb. 1.10 - —
Mace oil, dist., cns., dms. lb. 8.00 -10.00
Magnesia calcined, tech. bgs., ctns., frt equald lb. .25¾ 26½
Tech. syn., rubber grade, light, bgs., c.l., frt. equald lb .28¾ .30
Magnesia, calcined, tech., syn., rubber grade, extra light, bgs., c.l., frt. equald lb. .28 - —
bgs. l.c.l., frt equald lb .28¾- —
Above prices are quoted f.o.b. works, freight equald., with Metropolitan New York and competitive producing points.
Magnesia calcined, tech., heavy, 85% bgs. c.l. f.o.b. Lansing, New ton 39.50 - —
91%, bgs., c.l., same basis, ton 49.50 - —
95%, bgs., c.l. same basis ton 59.00 - —
USP light, bgs. lb 36½ 37½
USP, heavy, bgs lb 36½ 37½
Magnesite chemical grade, calcined, powd., bgs., c.l., works, frt equald ton 86.25 - —
Deadburnt, standard grain, bulk, c.l., Chawelah, Wash. ton 46.00 - —
Magnesium bromide, 80-lb. dm., f.o.b. works lb 1.15 - —
Magnesium carbonate, tech., bgs., c.l., frt equald lb .11 —
bgs., t.l., frt. equald lb .11½- —
bgs., l.c.l. frt equald lb .13½- .14
USP, bgs., c.l., frt. equald lb .13½- —
bgs., t.l., frt equald lb .14 —
bgs., l.c.l. frt equald lb .15 .16
Above prices are quoted f.o.b. works, freight equald., with Metropolitan New York and competitive producing points.
Magnesium chloride, anhyd 92%, flake or pebble, drums, c.l. works lb. 12¾ —
dms., l.c.l., works lb .14 .15
hydrous, 99%, flake, bgs., c.l., works ton 60.00 —
bgs., l.c.l., works ton 75.00 -100.00
Magnesium gluconate 100-lb dm., f.o.b. works E lb 1.42 —
Magnesium hydroxide, NF, powd., dms., 500-lbs or more, f.o.b. works lb. .24½ 25½
Magnesium lauryl sulfate, dms., c.l., frt alld lb .22½ —
dms., t.l., frt alld lb .23½ —
tanks, frt alld lb .21½- —
Magnesium metal, 99.8%, ingots, 10,000-lb lots or more, works lb .36 —
pigs., 10,000-lb. lots or more, works lb. .35¼- —
sticks, cs., works, same basis lb. 59 - —
Magnesium nitrate, cryst., dms., works lb .29 - —
Magnesium oxide (see Magnesia calcined).
Magnesium phosphate tribasic, NF, bbls lb .75 - —
Magnesium silicate (see Talc)
Magnesium silicofluoride, dms., works lb 10½- .12
Magnesium sulfate, tech., bgs., c.l., works 100 lbs 2.15 —
bgs. l.c.l., works 100 lbs 2.90 3.15
USP, cryst., bgs., c.l., works, 100 lbs. 2.35 - —
bgs. l.c.l. 5,000 lbs., 1 withdrawal 100 lbs 3.10 - —
bgs. smaller lots 100 lbs 3.35 - —
Magnesium trisilicate, USP, powd., fib. dms., 5,000-lb. lots lb. .38 - —
fib dms. 1,000-lb lots lb. .40 - —
fib dms. 100-lb lots lb .45 - —
USP, micronized powd., dms., 500-lb. lots lb. .80 - —
Malachite green, straight, PIA, bbls., works lb 5.30 - —
Malathion, dms., c.l. works lb .89 - —
dms. l.c.l. works lb .92 1.01
Maleic acid cryst. powd. dms lb .37¼ —
Maleic anhydride dms. c.l. frt equald lb. .24 —
dms. l.c.l. frt equald lb. .25½- —
tanks frt equald lb .22½ —
Maleic anhydride in bags ½c per lb less
Malic acid tech. dms lb .50 —
Mandelic acid NF dms., 1,000-lb lots lb 2.35 —
dms. smaller lots lb 2.40 2.50
Mandrake root, bls. lb. .42 - .44
Manganese acetate, dms. dlvd lb .35 —
Manganese borate, tech., fib. dms. lb. .23½- —
Manganese carbonate, chemical grade, 46% Mn, bgs., 20,000-lb lots and more, works lb. .11 - .16
Manganese chloride, CP, anhyd., dms., 20,000-lb lots, works lb. .21¾- —
smaller lots, works lb. .23½- —
Manganese dioxide, African, 83-87%, 40,000 to 99,999-lb. lots, burlap paper lined bgs., gross for net works ton.148.00 - —
40,000 to 99,999-lb lots, paper bgs., same basis ton.144.50 - —
Manganese dioxide, African, 83-87%, 40,000 to 99,999-lb. lots, dms. same basis ton.152.50 - —
Prices for manganese dioxide in 10,000 to 40,000-lb. lots $3 per ton higher.
Manganese gluconate, dms lb. 1.84 - —
Manganese hydrate, dms., dlvd lb .35 - —
Manganese hypophosphite, NF dms. lb. 3.52 —
Manganese linoleate, liq. 6% Mn, dms lb. .26½- —
Solid, precip., 8.2% Mn bbls lb. 41¼ —
Manganese metal, electrolytic, dms., c.l., dlvd. E lb. .34½- —
dms., ton lots, dlvd E lb. .37 - —
dms., smaller lots, dlvd E lb. .39 - —
Manganese naphthenate, liq., 6% Mn, dms., frt. alld lb. .29¾- —
Manganese resinate, fused, 3½% Mn, dms lb 29¼ —
Precip., 6½-7% Mn, dms. lb. 42 - —
Manganese sulfate, fertilizer grade, 65% $MnSO_4$, bgs., c.l., dlvd. S. E ton.86.50 - —
bgs., l.c.l., dlvd S. E ton 93.50 - —
75%, $MnSO_4$, 30-tons same basis 85.00- —
Manganese tallate 6%, dms lb. .26½- —
Mannitol, com'l fib dms. ton lots, works lb. .60 —
fib. dms., to ton lots, works lb. .62 —
fib. dms., single dm., works lb. .65 —
Marine pitch, dms lb. .04¼- .05
MBTS (see Mercaptobenzothiazyl disulfide).
MBT (see 2-Mercaptobenzothiazole).
Melamine, bgs., c.l., works lb. .26½- —
bgs., l.c.l., works lb. .28 —
Menadione, USP bots. gram. .044 .05
Menhaden oil crude, tanks, works, Atl. & Gulf ports lb. .05½- —
Menthol, nat USP, Brazilian large crystals, cs lb. 7.40 - 7.60
Nat., USP, Brazilian, regular crystals, cs lb. 7.30 - 7.50
Japanese, cs. lb.10.25 -10.50
Syn., USP, racemic, 25-lb. lots lb 4.25 —
2-Mercaptobenzothiazole, bgs., fib. dms., ton lots, works, frt. alld lb. .44 - —
bgs., fib. dms. less ton lots, same basis lb .46 - —
Mercaptobenzothiazyl disulfide, bgs., fib dms., ton lots, works, frt. alld lb. .54 - —
bgs. fib dms. less ton lots, same basis lb .56 - —
Mercuric chloride, NF, cryst., dms., 100 lbs., f.o.b works lb 4.03 - —
USP, gran. or powd., 50-lb. dm., 100 lbs. f.o.b works lb 3.78 - —
Mercuric cyanide, NF VIII powd., fib dms lb 5.84 - —
Mercuric iodide, red, NF, 100-lb. dm., f.o.b. works lb 6.97 - —
Mercuric oxide, red, NF IX 50-lb. dm. 100 lbs. f.o.b works, lb. 4.72 - —
tech., 50-lb dm. 100 lbs., same basis lb 4.52 - —
yellow, NF, 50-lb. dm., 100 lbs., same basis lb. 4.89 - —
tech., dms., 100 lbs. lb. 4.35 - —
25-lb. fib. dm. lb. 4.38 - —
Mercurous chloride (see Calomel)
Mercury, ammoniated (see White precipitate, USP XV)
Mercury metal 76 lbs. per flask net-flask.188.00 -190.00
Mesityl oxide, dms. c.l., dlvd lb 15 —
dms., l.c.l., dlvd lb. 16½ —
tanks, dlvd lb 12½- —
Meta aminophenol (see m-Aminophenol)
Metachloroaniline (see m-Chloroaniline)
Metanilic acid, dms., works lb. .57 - .75
Metanitroparatoluidine (see m-Nitro-p-toluidine)
Metanitroaniline (see m-Nitroaniline)
Metaphenylenediamine (see m-Phenylenediamine).
Metatoluidine (see m-Toluidine)
Metatolylenediamine (see 2,4-Tolylenediamine).
Methacrylic acid glacial 98%, dms. truckloads frt equald lb 42½ —
dms. smaller lots frt equald. lb. 43 .75
tanks works frt equald lb. 40 —
Methanol, nat, denaturing grade, tanks frt alld gal. 85 —
Syn., zone 1, dms., c.l., or t.l. min dlvd gal. 51½ —
dms. l.c.l. dlvd gal. 61½ —
Syn., tankwagon, 2,000-4,000 gal. lots, dlvd. Metropolitan area gal. .35 - —
tankwagon, 4,000 gal min., dlvd gal. .30 —
tankwagon, 4,000 gal min., f.o.b. terminal gal. .29 —
Syn., zone 2, dms., c.l., t.l., min., frt. alld. or dlvd. gal. .55½- —
dms., l.c.l., works gal. .65½- —
Methanol, syn, Zone 2, tankwagon, 2,000-4,000 gal. lots, min., dlvd. Metropolitan area gal. .39 - —
tanks, 4,000 gal. min., dlvd. gal .34 —
Synthetic methanol zones are: Zone 1 is all continental US E. of eastern boundaries of Ariz., Idaho and Utah. Zone 2 is remainder of US west of above state boundaries comprising Ariz., Calif., Idaho, Nev., Ore., Utah and Wash.
Methapyrilene fumarate, 100-999 lbs., dms., f.o.b works, frt. equald lb 21.75 - —
Methapyrilene hydrochloride, 100-999 lbs., dms., f.o.b works, frt equald lb.27.25 —
Methenamine (see Hexamethylene-tetramine).
Methionine hydroxyanalogue (calcium salt) 90% min., dms., t.l., frt alld lb 1.10 —
dms., l.t.l., same basis lb 1.16 - —
dl-Methionine, fib dms., frt. alld. 50-lb or more lb .2.50 - —
Feed grade, 98% fib dms. same basis lb. 1.43 - —
Methoxychlor, 50% wettable powder, dealers, dms. cs lb. .66 - —
Methyl abietate, non-ret dms., c.a., dlvd zone 1 lb. .21½- —
non-ret. dms., t.c.l., same basis lb. .22 .22½
Methyl abietate, hydrogenated, non-ret. dms., c.l., dlvd. zone 1 lb. .23½- —
non-ret. dms., t.c.l., same basis, lb. 24 24½
Zone 1 includes New England and Middle Atlantic states, Va., W. Va., N. C., Ohio, Ky., Mich., Ind., Ill., Wis., St. Paul and Minneapolis, Minn.; St. Louis, Mo.; Miss., Ala., Ga., Fla., S. C. and Tenn.
Methyl acetone, nat. dms., t.c.l., E of Miss. frt alld gal. .62½- —
Syn., dms., c.l., frt. alld. E gal. .60½- —
dms., t.c.l., frt. alld. E gal. 70½- —
tanks, frt. alld. E. gal. .44½- —
Synthetic methyl acetone E territory comprises all states East of and including Colo., Mont., N. Mex. and Wyo. West territory is made up of all states west of those four.
Methyl acrylate, dms., c.l., t.l., dlvd. lb. .35¼- —
dms., t.t.l., dlvd lb. .36¼- —
tanks, dlvd. lb. .32¼- —
Methyl alcohol (see Methanol).
Methyl amyl acetate, dms., c.l., dlvd. E lb. .17 - —
dms., t.c.l., dlvd. E. lb. .18½- —
tanks, dlvd. E. lb. .14½- —
Methyl amyl alcohol, dms., c.l., dlvd. lb. .17 —
dms., t.c.l., dlvd. lb. .18½- —
tanks, dlvd. lb. .14½- —
Methyl amyl ketone, dms., c.l., t.l., f.o.b. works lb. 1.99¼- —
dms., l.c.l., same basis lb 2.00 - —
N-Methylaniline, tech., tanks, frt. alld lb .60 —
Methylanthranilate, cns. lb. 2.20 - 2.70
Methyl benzoate, cns., dms. lb. .60 .75
Methyl bromide, service organization prices, 40 to 375-lb. cyls., large lots, frt. alld lb. .62 - .72
on 100 lbs lb. .73 - .79
Methyl cellulose, special vis., (1,500-4,000 cps.) 50-lb bgs., c.l., works lb. .82 - —
50-lb. bgs., 2,000-lb. lots and more, same basis lb. .89 - —
50-lb. bgs., smaller lots, frt. alld. on 100 lbs lb. 1.05 - —
Methyl cellulose, standard vis. (15,400 cps.) 50-lb. bgs., c.l., frt. alld lb. .69 - —
50-lb bgs., 2,000-lb. lots and more, same basis lb. .76 - —
50-lb. bgs., smaller lots, frt. alld.
Methyl chloride, indust. cyls., frt. equald lb. .22¼- —
tanks, multi-unit, same basis, lb. .16¼- —
tanks, single unit, same basis, lb. .12¾- —
Methyl chloride, refrigerator mfgs., cyls., dlvd lb. .48¾- —
Other consumers or service men, cyls., dlvd lb. .67¾- —
Methyl chloroform (see 1,1,1-Trichloroethane).
Methyl cinnamate, cns lb. 2.05 - 2.20
Methyl ethyl ketone, dms., c.l., dlvd lb. .15 —
dms., t.c.l., dlvd lb. .16½- —
tanks, dlvd. lb. .12½- —
2-Methyl-5-ethyl pyridine, dms., c.l., works lb. .45 —
dms., t.c.l., works lb. .45¾- —
tanks, works lb. .43 —
Methyl formate, refd., dms lb. .35 .40
Tech., non-ret. dms., any quantity works lb. .10 - —
tanks, works lb. .07 - —
a-D Methyl glucoside, tech., 100-lb. multiwall paper bgs., c.l., works lb. .26 - —
100-lb. multiwall paper bgs., t.l., min 23,000 lbs., works, lb. .27 - —
100-lb. multiwall paper bgs., l.t.l., works lb. .28 —
Methyl heptin carbonate, bots lb.27.25 -29.00
Methyl p-hydroxybenzoate 6b dms. lb 1.90 2.00
Methyl ionone, standard, cns. dms. lb 3.40 3.85
Methyl isoamyl ketone, dms., c.l., dlvd lb. .20 —
dms., t.c.l., dlvd. lb. .20½- —
tanks, dlvd. lb. .17½- —
Methyl isobutyl carbinol (see Methyl amyl alcohol).
Methyl isobutyl ketone, dms., c.l., dlvd lb. .17 - —
dms., t.c.l., dlvd lb. .18½- —
tanks, dlvd lb. .14½- —
Methyl methacrylate, dms., c.l., t.l., frt. equald. with Belle, W Va lb. .31 - —
dms., smaller lots, same basis lb. .31½- —
tanks, same basis lb. .29 —
Methyl naphthyl ketone, cryst., cns lb. 2.45 4.30
Methyl parahydroxybenzoate (see p-Hydroxybenzoate)
Methyl parathion, tech., 80%, dms., frt. alld. E lb. .84 - —
Methyl parathion prices 2c. per lb. higher in West
Methyl roseaniline chloride, NF, 5-lb fib dms lb 6.90 - —
Methyl salicylate, dms., t.l., frt. alld lb. 60¼- —
dms., l.c.l., same basis lb. .62½ 67½
Methyl testosterone, USP, 100-gram bots gram No Prices.
2-Methyl-5-vinyl pyridine, 40-dm lots or more, f.o.b. works lb 1.32 - —
5-39 dm lots, same basis lb 1.37 - —
tanks, same basis lb 1.27 - —
Methyl violet toner, molybdated, PMA bbls., dlvd. E of Rockies lb 2.95 - —
Tungstated, PTMA, bbls., same basis lb 4.35 —
Methyl violet prices 1c higher W. of Rockies
Methylene blue, NF, crystals, 100-lbs., frt. equald lb. 4.10 - —
Methylene chloride, tech., straight or assorted, dms., c.l. or t.l., dlvd lb. .12½- —
dms., t.c.l., t.l., dlvd lb. .13¾- —
tanks, 4,000-gal. min., dlvd lb. .11¼- —
b-Methylnaphthalene, 32°C., m.p., dms, works lb 90 —
Methylpentanediol (see Hexylene glycol)
Methylphenylpyrazolone (see 1-phenyl-3-methyl-pyrazolone-5)
Methylthionine chloride (see Methylene blue).
Mica, dry-grd., paint, plastic, 100 mesh, bgs. c.l., works lb .04 —
roofing, 20 to 80 mesh, works lb .03 —
wet-grd., biotite, bgs., c.l., works, frt. alld. E lb. 2.05 - 2.20
bgs. t.c.l., ex-whse lb. .06½- —
paint or lacq., bgs., c.l., 325 mesh, works, frt alld E. lb. .07¼- —
bgs. t.c.l. ex-whse or freight alld. E lb. .08¼- —
wet-grd., rubber, bgs., c.l., works, frt. alld. E lb. .09 —
bgs., l.c.l., ex-whse or frt. alld. E lb. .08 - —
wallpaper, bgs., c.l., works, frt. alld. E lb. .08¾- —
bgs., ex-whse or frt. alld E. lb. .08¾- —
Mica, white, 5-10 microns, bgs., c.l., works, frt. alld. E. lb. .09¼- —
Mica, wet-grd. W. of Miss. ½c. higher; W. of Rockies 1c higher.
Microcrystalline wax, petroleum, coating grades, tankcars, works lb. .10 - .11
laminating grades, tankcars, works lb. .11 - .13
Mineral black, bgs., works lb. .0160- .0673
Mineral oil, white tech., 50-65 vis., non ret. dms., c.l., f.o.b. refy gal. .70 - —
non-ret. dms., t.c.l., same basis gal. .75 - —
tankcars, refy. gal. .54 - —
65-75 vis., non-ret. dms., c.l., same basis gal. .70½- —
non-ret. dms., t.c.l., same basis gal. .75½- —
tankcars, refy. gal. .54½- —
NF, 80-90% vis., non-ret. dms., c.l., same basis gal. .71 - —
non-ret. dms., t.c.l., same basis gal. .76 - —
tankcars, refy. gal. .55 - —
135-138 vis., non-ret. dms., c.l., same basis gal. .77 - —
non-ret. dms., t.c.l., same basis gal. .82 - —
tankcars, refy. gal. .61 - —
145-155 vis., non-ret. dms., c.l., same basis gal. .83 - —
non-ret. dms., t.c.l., same basis gal. .88 - —
tankcars, refy. gal. .67 - —
USP, 180-190 vis., non-ret. dms., c.l., same basis gal. .85 - —
non-ret. dms., t.c.l., same basis gal. .90 - —
tankcars, same basis gal. .69 - —
200-210 vis., non-ret dms., c.l., f.o.b. refy gal. .875 - .90
non-ret. dms., t.c.l., same basis gal. .925 - —
tankcars, refy. gal. .69 - .715
340-350 vis., non-ret. dms., c.l., f.o.b. refy gal. .92½- —
non-ret. dms., t.c.l. gal. .97½- —
tankcars, refy. gal. .76½- —
(For dlvd. N.Y. prices add 2c. for c.l. and 3c. for t.c.l.).
Mineral orange, American, bbls., c.l., works lb. .15½- —
bbls., l.c.l., same basis lb. .16½- —
Mineral spirits, petroleum, odorless, tankcars, New Jersey gal. .29 - —
New York gal. .305 - —
Houston, Texas gal. .25 —
regular, tankcars, New Jersey and New York gal. .18 - —
Group 3 gal. .12875- —
Houston, Texas gal. .145 —
140 F. flash, New York, New Jersey at terminal gal. .205 - —
Houston Texas gal. .17 - —
Mink oil, dms. lb. 1.75 - —
Mirbane oil (see Nitrobenzene).
MNPT maroon toner, kgs., c.l., works lb. 6.30 - —
Molasses, blackstrap, feed grade, tanks, New Orleans gal. .12¼- .13
tanks, New York gal. .15 - .16
Molybdated orange, bbls. lb. .49 - —
Molybdenum metal, powd., 80 or 200 mesh, ctns., works kilo. 7.84 - —
325 mesh, ctns., works kilo. 9.13 - —
Molybdenum trioxide, purif., dms., works lb. 1.25 - —
Tech., chemical, dms., works, basis Mo content lb. 1.61 - —
Tech., metallurgical, dms., works, basis Mo. content lb. 1.60 - —
Molybdic acid, 84%, dms., works, lb. 1.15 - 1.25
Monoallylamine, dms., c.l., dlvd lb. .965 - —
dms., c.l., dlvd. lb. .995 - —
tanks, dlvd lb. .96 - —
Monobutylamine, dms., c.l., dlvd. E, of Rockies lb. .57½- —
dms., t.c.l., same basis lb. .59 —
tanks, same basis lb. .55 —
Mono-tert-butyl-m-cresol, dms., c.l., works lb. .55 - —
dms., t.c.l., works lb. .56 - —
tanks, works lb. .54 - —
Monochloracetic acid, purif. (see Chloroacetic acid mono).
Monochlorobenzene, dms., c.l., frt. alld. or dlvd. E lb. .10½- —
dms., t.c.l., same basis lb. .11½- —
tanks, same basis lb. .08¾- —
Monochlorobenzene prices in the West 1¾c. higher.
Monoethanolamine, dms. c.l., dlvd. E lb. .27½- —
dms., t.c.l., same basis lb. .29 - —
tanks, same basis lb. .25 - —
Monoethylaniline (see N-Ethylaniline).
Monoethylortholuidine (see N-Ethyl-o-toluidine)
Monoisopropanolamine, dms., c.l., dlvd. E lb. .27½- —
dms., t.c.l., same basis lb. .29 - —
tanks, same basis lb. .25 - —
Monoisopropylamine, anhyd., dms., c.l., dlvd lb. .33½- —
dms., t.c.l., same basis lb. .35 - —
tanks, same basis lb. .31 - —
Monomethylamine, anhyd., cyls., t.c.l., frt equald., 100% basis lb. .30 - —
tanks, 100% basis lb. .26 - —
30-35% soln., dms., c.l., frt. equald 100% basis lb. .36 —
30-35% soln., dms., t.c.l. frt. equald, 100% basis lb. .36½- —
tanks, frt equald, 100% basis, lb. .26 - —
40% soln, dms, frt equald., 100% basis lb. .33 - —
dms., t.c.l., frt. equald., 100% basis lb. .33½- —
tanks, frt equald, 100% basis lb. .26 - —
Monopentaerythritol, tech. bgs., c.l., dlvd lb. .29 - —
bgs., l.c.l. lb. .30 - —
Monopotassium glutamate, dms., 1,000-lb lots, frt alld lb 3.05 - —
dms 100-lb lots, same basis lb 3.25 - —
Monosodium glutamate, dms., dlvd. lb. 1.02 - 1.07
Monosodium phosphate (see sodium phosphate, monobasic)
Montan wax, Calif., refd., bgs. lb. .29 - .30
Imp., crude, Bohemian, bgs. lb. .25 - .26
German, bgs. lb. .25 - .26
Morphine, cns. 100-oz. f.o.b. works oz. 12.35 - —
Morphine hydrobromide, cns., 100-oz., f.o.b. works oz 9.90 - —
Morphine hydrochloride, NF, cns., 100-oz., f.o.b works oz. 9.90 - —
Morphine sulfate, USP, cns., 100-oz., f.o.b works oz. 9.90 - —
Morpholine, dms., c.l. dlvd E lb. .55¼- —
dms., l.c.l., dlvd. E lb. .56¾- —
tanks, dlvd E lb. .52¾- —
Muriatic acid (see Hydrochloric acid).

Musk, syn., ambrette, fib, dms., 100-lb. lots	lb.	4.40	4.80
cns., 25-lb. lots	lb.	4.50	5.00
Ketone, fib, dms., 100-lb. lots	lb.	4.60	5.10
cns., 25-lb. lots	lb.	4.70	5.20
Xylol, fib, dms., 100-lb. lots	lb.	1.28	—
cns., 25-lb. lots	lb.	1.40	—
Mustard seed, Danish, yellow, bgs.	lb.	.11	—
Montana, yellow, bgs.	lb.	.10¼	—
Oriental, bgs.	lb.	.09	—
Mustard, oil, syn., bots.	lb.	1.60	1.85
Myristic acid, bgs.	lb.	.23¼	.25¾
tanks	lb.	.22¼	—
Myrrh gum, cs.	lb.	.65	.75

N

Naphtha, high solvency (see Solvent naphtha, petroleum).			
Naphtha, petroleum, cleaner's (see Cleaner's naphtha).			
Naphtha, VM&P, petroleum, tank-cars, New Jersey and New York	gal.	.19	—
Group 3	gal.	.13875	—
Houston, Texas	gal.	.155	—
Naphthalene, crude, dom., 73°, tanks, f.o.b., frt. equald	lb.	.06¼	.06½
Refd. indust. chipped, crushed, bgs., frt. equald	lb.	.14½	—
tanks, same basis	lb.	.11¾	—
Refd., indust., balls, flakes, wholesalers, jobbers., bbls., c.l., same basis	lb.	.15½	—
cs. 50 lbs. c.l. same basis.	lb.	.15¾	—
1-lb pkgs. c.l. same basis.	lb.	.18½	—
a-Naphthol, dms. frt. alld	lb.	1.02	—
b-Naphthol, tech. flake bbls., c.l., works	lb.	.34	—
bbls., l.c.l., works	lb.	.36	—
Naphthol, ITR, red toner, bbls., works	lb.	5.00	—
1-Naphthol-3,6-disulfonic 8-amino acid (see H acid)			
1-Naphthol-4 sulfonic acid (see Neville and Winther's acid)			
1-Naphthol-5-sulfonic acid (see L acid)			
1-Naphthol-5-sulfonic 8-amino acid (see S acid).			
2-Naphthol-6,8-disulfonic acid (see Gamma acid).			
Naphthol sulfonic mixed acid (see Cleve's acid)			
a-Naphthylamine, dms., frt. alld	lb.	.52	—
b-Naphthylamine tech. flake, bbls., works	lb.	1.60	—
1-Naphthylamine-5-sulfonic acid (see Laurent's acid)			
2-Naphthylamine-4,8-disulfonic acid (see Cassella acid).			
2-Naphthylamine-1-sulfonic acid (see Tobias acid).			
2-Naphthylamine-6-sulfonic acid (see Broenner's acid).			
2-Naphthylamine-7-sulfonic acid (see F acid)			
Naringin, fib dms.	lb.	8.50	—
Neatsfoot oil, 15° cold test, dms	lb.	.29	Nom.
20° cold test, dms.	lb.	.28	Nom.
30° cold test, dms.	lb.	.27	Nom.
Neocinchophen, USP dms., frt. adjusted	lb.	7.00	8.00
Neomycin sulfate fib dms., 1-kilo basis activity	gram.	.18	—
fib dms. 100-999-gram lots, basis activity	gram.	.25	—
Tech., fib. dms	gram.	.13½	—
Neopentylglycol dms., c.l., dlvd	lb.	.32	—
dms. l.c.l. same basis	lb.	.33	—
Neroi, dms.	lb.	4.75	—
Neroli oil, NF, French, bots.	lb.	425.00	575.00
Tunisian, bots.	lb.	400.00	—
Nerolin, cns.	lb.	2.45	2.85
Neville and Winther's acid, dms., frt. alld	lb.	1.50	—
Niacinamide (see Nicotinamide).			
Nickel acetate, bbls., dlvd.	lb.	.72	.79
Nickel carbonate, bbls., dlvd.	lb.	.83	.90
Nickel chloride, bbls., dlvd.	lb.	.39¼	.47½
Nickel formate, bbls., ton lots, frt. alld	lb.	.78	.79
Nickel metal, electro cathodes, cs., works	lb.	.81¼	—
Nickel nitrate, dms., frt. alld.	lb.	.34½	.36½
Nickel oxide, black, bbls.	lb.	.92	—
Green, bbls.	lb.	.91	—
Nickel sulfate, bgs., c.l., dlvd.	lb.	.30	—
bgs., l.c.l., dlvd.	lb.	.30½	.33
Nicotinamide, USP, 50-kilo, dms., frt. equald	kilo.	5.75	—
dms., smaller lots, same basis,	kilo.	5.85	6.05
Nicotinamide hydrochloride, 50-kilo dms., dlvd	kilo.	6.50	7.50
Nicotine sulfate 40%, dealers, 50-lb. dms. frt. alld	lb.	1.20	—
40% manufacturers, 500-lb. dms., frt. alld	lb.	1.05	—
Nicotinic amide, USP (see Nicotinamide).			
Niger seed, bgs.	lb.	.10¼	—
Nikethamide, cbys.	lb.	5.00	—
Nitric acid 36° Be., cbys., c.l., works E 100 lbs.		5.75	—
cbys., l.c.l., works E 100 lbs.		6.05	6.85
38° Be., cbys. c.l., works E, 100 lbs.		6.25	—
cbys., l.c.l., works E 100 lbs.		6.55	7.35
40° Be., cbys., c.l., works E 100 lbs.		6.75	—
cbys., l.c.l., works E 100 lbs.		7.05	7.85
42° Be., cbys., c.l. works E, 100 lbs.		7.25	—
cbys., l.c.l., works E 100 lbs.		7.55	8.35
58.5 to 68% HNO_3, tanks, works, 100% basis 100 lbs.		3.90	—
94½ to 95½% HNO_3, tanks, works, 100% basis 100 lbs.		4.90	—
Nitric acid, CP, NF, consumer, cbys., extra, c.l., works	lb.	.18½	—
cbys. extra, l.c.l. works,	lb.	.20	—
5-pint bots., extra, cs., c.l., same basis	lb.	.22½	—
5-pint bots. extra, cs., l.c.l., same basis	lb.	.24	.25
dms., frt alld	lb.	.99	—
4-Nitro-2-aminophenol, tech., paste, dms., l.c.l., works	lb.	.64	—
m-Nitroaniline, cryst., dms., frt. alld	lb.	1.15	—
Paste, dms., frt. alld., 100% basis		1.10	—
o-Nitroaniline, flaked, dms., t.l., frt. alld	lb.	.49	—
dms., t.l., frt alld	lb.	.51	—
o-Nitroaniline orange toner, kgs.	lb.	1.50	—
p-Nitroaniline, c.l., t.l., dms., 20,000 lb. min., dlvd	lb.	.44½	—
dms., l.c.l., same basis	lb.	.46½	—
o-Nitroanisole, tech., tanks, frt. alld.	lb.	.38	—
p-Nitroanisole, tech., solid, dms., frt. alld	lb.	.72	—
Nitrobenzene, dbl dist., dms., c.l., frt. alld	lb.	.13	—
dms., l.c.l., frt. alld.	lb.	.14	—
tanks, frt. alld.	lb.	.11	—
p-Nitrobenzoic acid, dms., c.l., t.l., works	lb.	.53	—
dms., l.c.l., works	lb.	.54	—

Nitrocellulose, ester-soluble, 30-35 cps., ¼, ½, ¾, 5-6, 15-20, 30-40, 60-90, 125-175 seconds, bbls., c.l., works	lb.	.39¼	—
bbls., l.c.l., same basis	lb.	.42½	—
18-25 cps., bbls., c.l., same basis.	lb.	.41¼	—
bbls., l.c.l., same basis	lb.	.44½	—
250-400, 600-1,000 seconds, bbls., l.c.l., same basis	lb.	.44½	.47½
Spirit soluble, 30-35 cps., ¼, ½ seconds, bbls., c.l., same basis	lb.	.44	—
bbls., l.c.l., same basis	lb.	.47	—
5-6 cps., 40-60 seconds, bbls., c.l., same basis	lb.	.43	—
bbls., l.c.l., same basis	lb.	.46	—
Denatured alcohol used in the manufacture of nitrocellulose is charged extra. Drums extra but returnable			
o-Nitrochlorobenzene, dms. c.l., frt. alld	lb.	.15	—
dms., l.c.l., same basis	lb.	.16	—
tanks, same basis	lb.	.13	—
p-Nitrochlorobenzene, dms.	lb.	.26	.27
2-Nitro-p-cresol, tech., dms., t.l.	lb.	.71	—
dms., l.t.l.	lb.	.73	—
Nitroethane, dms., c.l., dlvd. E	lb.	.28½	—
dms., l.c.l., dlvd. E	lb.	.30	—
tanks, dlvd E	lb.	.26	—
Nitroethane prices West of Rockies are 1c. higher.			
Nitrogen solutions, direct application, tanks, f.o.b. works	unit-ton.	1.64	—
Manufacturing type, same basis.	unit-ton.	1.32	—
Nitrogen tetroxide, indust., tankcars, f.o.b. Hopewell, Va	lb.	.065	—
Cyls., t.l., min. 5 tons, same basis	lb.	.07½	—
Cyls., l.c.l., l.t.l. same basis	lb.	.15	—
Nitrogenous process tankage, bulk, works	unit-ton	4.50	5.00
Nitrogenous sewage sludge, bulk, f.o.b. Chicago, works.	unit-ton.	3.35	—
(The foregoing price is per unit NH_3, plus 50c. per unit a.p.a., bulk, f.o.b. producers' works, Chicago.)			
Nitromethane, dms., t.l., dlvd. E	lb.	.26	—
dms., l.t.l., dlvd. E	lb.	.27½	—
Nitromethane prices West of Rockies are 1c higher.			
a-Nitronaphthalene, bbls., frt. alld.	lb.	.31	—
o-Nitrophenol, dms., works, frt. equald	lb.	.94	—
p-Nitrophenol, dms., c.l., frt. alld.	lb.	.45	—
dms., l.c.l., frt. alld	lb.	.47	—
1-Nitropropane, dms., c.l., frt. alld. E. of Rockies	lb.	.28½	—
dms., l.c.l., same basis	lb.	.30	—
tanks, same basis	lb.	.26	—
1-Nitropropane prices West of Rockies are 1c. per lb. higher.			
2-Nitropropane, dms. c.l., frt. alld. E of Rockies	lb.	.18½	—
dms., l.c.l., same basis	lb.	.20	—
tanks, same basis	lb.	.16	—
m-Nitrotoluene, tech., dms., frt. alld.	lb.	.50	—
o-Nitrotoluene, dms., c.l., frt. alld	lb.	.15	—
dms., l.c.l., frt alld.	lb.	.16	—
tanks, frt. alld.	lb.	.13	—
p-Nitrotoluene, tech., cast, dms., c.l., works	lb.	.37½	—
dms., l.c.l., works	lb.	.38	—
flake, dms., c.l., t.l., works	lb.	.37½	—
dms., l.c.l., works	lb.	.38	—
m-Nitro-p-toluidine, dms.	lb.	1.35	—
Nonylphenol, dms. c.l. frt. alld	lb.	.22½	—
dms., l.c.l., frt. alld	lb.	.23½	—
tanks, frt. alld	lb.	.20	—
Nonylphenol prices on shipments to Western States are 2c. higher.			
Noscapine, cns.	oz.	8.00	—
Nutmegs, East Indian, whole, bgs.	lb.	1.08	—
West Indian, bgs.	lb.	.88	—
Nutmeg oil, USP dist., East Indian, cns	lb.	8.00	12.00
West Indian, cns.	lb	9.00	12.00
Nux vomica, bls.	lb.	.20	—
Powd., bbls., bxs.	lb.	.20	.22

O

Ocher (see Iron oxide yellow, nat.).			
Ocotea cymbarum oil, dms	lb.	.44	.47
Octane, indust., tanks, Bayonne, N.J	gal.	.20	—
1-Octanol, tech., dms. c.l., dlvd., Zone 1	lb.	.41½	—
dms., l.c.l., dlvd. Zone 1	lb.	.43½	.44½
tanks, dlvd. Zone 1	lb.	.37½	—
Octyl alcohol, perfumers grade, bots.	lb.	1.60	3.25

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Octyl alcohol, tech. (see t-Octanol, tech)
n-Octyl-decyl alcohol blend, tanks, dlvd lb. .19 - —
n-Octyl n-decyl phthalate, dms., c.l., frt. alld. E lb. .29½- —
dms., l.c.l., same basis lb. .31 - —
tanktrucks, 1,000 - 1,999 gals., same basis lb. .27½- —
tanktrucks, 2,000 gals., same basis lb. .27 - —
tert-Octylamine dms. c.l. t.l. f.o.b. works lb. .54½- —
dms c.l. same basis lb 55 - -
Octylphenol, bgs. c.l., works lb .22½ —
bgs. l.c.l. works lb 23 —
tanks works lb 21½ —
Octylphenol in dms., 1lc. higher

OILS
Oil quotations are listed individually For example, prices on Oil, coconut may be found in the C's under Coconut oil.

Oiticica oil, liquid, dms lb. .15¾- .16
tanks lb. .14¼- —
Oleic acid, dbl.-dist. (white), dms, lb. .18½- .21
tanks lb. .16 - —
S. D., dms, lb. .17½- .20
tanks lb. .15 - —
Oleum (see Sulfuric acid, fuming).
Olibanum gum, siftings, cs lb. 15 .20
Fears cs lb 22 .30
Olibanum oil, bots lb 5.00 7.65
Extra fine bots lb 8.00 9.50
Olive oil, edible, dms., spot, ex whse. gal. 2.35 - 2.40
Olivine, crude, works ton 12.00 - —
20 mesh, works ton 15.00 - —
100 mesh works ton 20.00 - —
Opium USP cns. 25-lbs., f.o.b. works oz. 19.20 - —
gran. cns. 50 lbs. same basis oz. 21.65 - —
powd. cns. 50 lbs. same basis oz. 21.65 - —
Orange oil, expressed, USP, Calif., cns. dms lb 70 90
Calif., sweet, cns. dms lb. .60 —
Florida, cns. dms lb 0 45
Messina cns lb 3.25 5.00
West Indian, bitter, cns., dms lb 2.50 3.50
Orange peel, bitter, Haitian, bls lb. 18 .20
Sweet lb 28 30

ORANGE PIGMENTS
Orange pigment quotations are listed individually For example, prices on Orange, chrome, may be found in the C's under Chrome orange.

Origanum oil, Spanish cns lb 1.80 2.30
Orris root, Florentine, bls lb .55 —
powd. bbls. bxs lb 65 - —
Verona, bls lb 35 - —
powd. bbls. bxs lb 45 - —
Orthoanisidine (see o-Anisidine).
Orthochlorobenzaldehyde (see o-Chlorobenzaldehyde)
Orthochloroaniline (see o-Chloroaniline).
Orthochlorobenzoic acid (see o-Chlorobenzoic acid)
Orthochloroparanitroaniline (see 2-Chloro-4-nitroaniline)
Orthochlorophenol (see o-Chlorophenol).
Orthocresol (see o-Cresol).
Orthocresotinic acid (see 2,3-Creosotic acid).
Orthodichlorobenzene (see o-Dichlorobenzene).
Orthonitroaniline (see o-Nitroaniline).
Orthonitrochlorobenzene (see o-Nitrochlorobenzene).
Orthonitroparachlorophenol (see 2-Nitro-4-Chlorophenol).
Orthonitrophenol (see o-Nitrophenol).
Orthonitrotoluene (see o-Nitrotoluene).
Orthophenetidine (see o-Phenetidine).
Orthophenylphenol (see o-Phenyl phenol).
Ortho-tertiary amylphenol (see o-tert-Amylphenol)
Orthotoluidine (see o-Toluidine base)
Orthotoluidine (see o-Toluidine).
Ouabain USP bots gram 3.00 4.00
Ouricury, wax, crude, bgs lb. .50 .52
Refd., pure, bgs lb. .53 - .55
Oxalic acid, bgs., c.l., works lb. 18 —
bgs., 10,000 lb. lots, works lb. 19 —
bgs., smaller lots, works lb. .20½- —
Oxalic acid in drums is priced ½c. per lb higher.
b-Oxynaphthoic acid pigment manufacture, dms., frt alld lb. 912 —
Dyestuff manufacture dms., same basis lb 1.03 1.14
Oxyquinolin sulfate, cns. 100-lb lots, works lb 4.75 5.00
cns., smaller lots, works lb 4.92 5.17

P

Palm oil, clarif., dms lb. .14½- .15½
tanks, New York lb. .11¾- —
Palm oil acid, double dist. dms. lb. .16½- .19
tanks lb. .14 —
single dist., dms. lb. .16 .18½
tanks lb. .13½ —
Palmarosa oil, cns lb 5.25 6.50
Papain, powd. bots lb 3.25 10.00
Papaverine hydrochloride, nat. or syn. USP cns., 25-oz to 100-oz lots oz 5.00 —
cns. smaller lots oz 5.05 5.20
Papaverine sulfate, nat., or syn., USP, cns oz. 7.10 - 7.35
Paprika, Bulgarian, bgs lb. .34 - —
Hungarian, bgs. lb. .33 - —
Spanish, bgs. lb. .39 - —
Para aminobenzoic acid (see p-Aminobenzoic acid)
Parachlorobenzoic acid (see p-Chlorobenzoic acid)
Paramethylphenylcinchonic acid (see Neocinchophen)
Paranitrobenzoic acid (see p-Nitrobenzoic acid).
Paratoluidinemetasulfonic acid (see p-Toluidine-m-sulfonic acid).
Para aminophenol (see p-Aminophenol).
Parachlorophenol (see p-Chlorophenol).
Parachloro-orthonitroaniline (see 4-Chloro-2 nitroaniline)
Para anisidin (see p-Ansidine)
Parachloraniline (see p-Chloraniline).
Parachlorobenzaldehyde (see p-Chlorobenzaldehyde)
Paracresol (see p-Cresol)
Paradibromobenzene (see p-Dibromobenzene).
Paradichlorobenzene (see p-Dichlorobenzene).
Para toner, red, bbls lb 1.30 —
Chlorinated kgs lb 1.41 - —
Paraffin, crude, scale, white, 123°-127°F. ASTM tanks refy. lb. .0655- .0660
Fully refd., 122°-124°F., ASTM, lb. .0765- —
125°-127°F., ASTM tanks, refy. lb. .0765- —
Paraffin, fully refined, 130°-132°F., ASTM, tanks, refy lb. .0765- —
132°-134° F., ASTM, tanks, refy. lb. .0765- —
135°-137°F., ASTM, tanks, refy. lb. .0765- —
AMP temperatures are an arbitrary 3°F higher than ASTM
Paraffin oil, pale, 100-110 vis., at 100°F., tanks east coast refy gal. .17½- —
Paraffin wax (see Paraffin)
Paraformaldehyde 91% flake, bgs., c.l., frt alld lb. .10 —
bgs., l.c.l. frt alld lb. .12 .13
91% powd., bgs. c.l. ex whse lb. .1715- —
bgs., l.c.l., ex whse lb. .1865- —
USP-X, fib, dms., c.l. f.o.b., works lb. .19 - —
fib. dms., 1,000-lb. lots, same basis lb. .20 - —
fib. dms., smaller lots, same basis lb. .21½- —
Paraldehyde tech., 98% 55-gal. dms., t.l., dlvd E lb. .14 - —
55-gal. dms. l.c.l., dlvd E lb. .15½- —
tanks, dlvd. E lb. .11½- —
Paranitroaniline (see p-Nitroaniline).
Paranitrochlorobenzene (see p-Nitrochlorobenzene)
Paranitrotoluene (see p-Nitrotoluene).
Paranitrophenol (see p-Nitrophenol).
Paraphenetidine (see p-Phenetidine).
Paraphenylenediamine (see p-Phenylenediamine).
Paraphenylphenol (see p-Phenylphenol).
Para-tertiary-amylphenol (see p-tert-Amylphenol).
Para-tertiary butylphenol (see p-tert-Butylphenol).
Parathion ethyl, dms. frt alld lb. .84 —
Parathion prices 2c per lb higher in West.
Paratoluenesulfonamide (see p-Toluenesulfonamide).
Passion flower herb bls lb .35 .40
Patchouli oil, imp., cns. lb. 5.00 - 5.60
Peach kernel oil USP (see Apricot kernel oil).
Peacock blue, fugitive, 100% color strength, 250-lb. bbls., dlvd E of Rockies lb. 1.00 —
Peacock blue price 1c higher W. of Rockies.
Peanut meal, old process, 45% bgs., f.o.b. mills ton. 66.00 - —
solvent, same basis ton. 64.00 Nom.
Peanut oil crude, tanks, f.o.b mills lb. .19½- —
Refd., dms, lb. .24¾- .25
tanks lb. .22¾- —
Pectin, dom., NF, citrus, powd., 100 kilos, f.o.b shipt pt kilo. 4.52 —
Pelargonic acid, dms., c.l., dlvd. E lb. .27½- —
ton lots, same basis lb. .28½- —
tanks, same basis lb. .25 - —
Penicillin, potassium, cryst., bulk, 1,000,000 units. 018 - —
Penicillin, procaine cryst., bulk, 1,000,000 units. .020 —
Pennyroyal oil USP imported, cns. lb. 2.35 - 2.80
Pentachlorophenol, 50-lb bgs., c.l., t.l., works, frt. equald lb. .21 - —
bgs., less than ton-lots, same basis. lb .23 - —
bgs., c.l., t.l., 2,000 lb. minimum, same basis lb. .22½- —
Pentachlorophenol in dms. 1c. higher.
Pentaerythritol, tech., bgs. c.l., dlvd lb. .29 - —
bgs., l.c.l., dlvd lb. .30 - —
Pentaerythritol, di- and tri-isomers (see Dipentaerythritol and Tripentaerythritol).
Pentane, indust., tanks f.ex refy. gal. .14 - —
Pentobarbital, dms. 100 lbs. or more lb. 6.00 - —
Pepper, black, Malabar, bgs lb. .40 - —
Lampong, bgs. lb. .40 - —
Red, Funtuas, bgs. lb. .30 - .31
Japanese, Hontaka, bgs lb. .35 - —
Santaka, bgs. lb. .30 - .31
Sudanese, bgs. lb. .40 - —
White, Muntok, bgs lb. .52 - —
Peppermint leaves, dom. USP, bls., cums lb. No stocks.
imp., USP dms. lb. .85 .90
Peppermint oil, nat., dms lb. 4.00 4.40
Redist., USP, dms lb. 4.25 4.65
Perchloroethylene dms. c.l., or t.l., dlvd lb. .13½ —
dms., t.c.l., dlvd. lb. .15¼ —
tanks, dlvd. lb. .11¾ —
tanktruck 1,000 gal min dlvd lb 12¼ —
Peri acid, dry bbls. frt alld lb 1.60 —
Paste bbls. frt alld lb 1.55 —
Peru balsam, dms lb 1.15 1.50
Persic oil USP (see Apricot kernel oil).
Petitgrain oil South American cns. dms lb. 2.45 - —
Petrolatum, NF, cream, dms., c.l., refy lb. .085 .08625
dms., l.c.l., dlvd lb. .11125-.11250
tanks, refy lb. .0625- .06375
NF, extra amber, dms., c.l., refy. lb. .07625- —
dms., t.c.l., dlvd lb. .1025- —
tanks, refy. lb. .05375- —
NF, soft yellow, dms., c.l., refy lb. .07625- —
dms., t.c.l., dlvd. lb. .1025- —
tanks, refy. lb. .05375- —
USP, lily white, dms., c.l., refy lb .09125-.09675
dms., t.c.l., dlvd lb. .1175- .1225
tanks, refy lb. 0 375- —
USP, snow white, dms., c.l., refy. .09625- —
dms., t.c.l., dlvd. lb. .1225- —
tanks, refy. lb. .07375- —
Full tankwagons of petrolatum are ¼c. more per lb. than tankcars.
Petroleum pitch (see Asphalt, petroleum).

PETROLEUM PRODUCTS
Petroleum product quotations are listed individually For example, prices on Petroleum mineral spirits, may be found in the M's under Mineral spirits, petroleum

Petroleum sulfonate, oil soluble, 60-62% sulfonic content, non-ret. dms. c.l. works. lb. .16½- .18¾
non-ret. dms. t.c.l. works lb. .17½ 19
tanks, works lb. .14½ .17
50-55% sulfuric content, non-ret. dms., c.l., works lb. .16 - —
non-ret. dms., t.c.l. works lb. .17 - —
tanks, works lb. .13 - —
o-Phenetidine dms. c.l. frt alld. E lb 91 - —
dms. t.c.l. same basis lb. 93 - —
p-Phenetidine, dms. c.l. frt. alld. lb 1.05 - —
dms same basis lb 1.08 - —
Phenobarbital, USP, dms., 100-lbs., frt. alld lb. 2.85 - 3.25
Phenobarbital-Sodium (see sodium phenobarbital)
Phenol, 90-92% (cresol 8-10%), non-ret. dms., frt. alld E. of Rockies lb. .16½- —
non-ret. dms., t.c.l., same basis. lb. .17½- —
tanks, same basis lb. .14¼- —
82-84% (cresol 16-18%), non-ret. dms., c.l., same basis lb. .16¼- —
non-ret. dms., t.c.l., same basis. lb. .17¼- —
tanks, same basis lb. .14¼- —
39° C., or above, tar dist., non-ret. dms., c.l., same basis lb. .17¾- —
non-ret. dms., t.c.l. lb. .18¾- —
tanks, same basis lb. .15¾- —
Phenol, USP, syn. dms., c.l., t.l., frt. alld. lb. .18¼- —
dms., t.c.l., same basis lb. .20¼- —
tanks, same basis lb. .16¼- —
Phenolphthalein, USP or yellow, 250-lb dm., 2,000 lbs., frt. alld lb. 1.30 - —
250-lb dm., same basis lb. 1.35 - —
Phenothiazine drench fib dms., t.l., dlvd lb. .46 - —
fib. dms., ton lots, dlvd lb. .49 - —
NF, fib. dms., t.l., dlvd lb. .45 - —
fib. dms., ton lots, dlvd lb. .48 - —
Phenyl acetate, dms. 100-lb. lots, works lb. .50 - —
Phenyl salicylate (see Salol)
Phenylacetaldehyde, soln. 50% bots lb. 2.15 2.35
100%, bots. lb. 3.80 4.00
Phenylacetic acid, pure, cryst., cns lb. 1.25 - 1.75
dl-Phenylalanine, dms., 1-kilo kilo. 65.00 - —
l-Phenyl-3-carbethoxy pyrazolone-5, fib dms. 200-lb lots, dlvd E lb. 3.45 - —
fib dms., smaller lots, dlvd E lb. 3.80 - —
N-Phenyldiethanolamine dms., c.l., dlvd E lb. .50 - —
dms., t.c.l., dlvd. E lb. .51½- —
tanks, dlvd. E lb. .47½- —
m-Phenylenediamine, dms., c.l., t.l., frt. alld lb. 1.08 - —
t.c.l., t.t.l., same basis lb. 1.10 - —
o-Phenylenediamine, comi, fib. dms, 100 to 1,000 lbs., works. lb. 1.70 - 1.80
p-Phenylenediamine, tech., dms, works lb. 1.55 - —
Phenylethanolamine, dms., c.l., works lb. .75½- —
dms., t.c.l., same basis lb. .76¼- —
Phenylethyl acetate bots lb. 1.25 1.40
2-Phenylethyl alcohol, extra, dms. lb. 1.14 1.50
Standard, dms lb. 1.10 1.60
b-Phenylethylamine dms. 20,000 lbs. or more, frt. alld lb. 1.50 - —
dms. smaller lots, frt alld lb 1.70 1.85
Phenylethylphenyl acetate bots lb 4.00 4.25
Phenylglyconic acid (see Mendelic acid).
Phenylhydrazine 97% 450-lb dms. lb. 1.45 - —
1-Phenyl-3-methyl pyrazolone-5 fib. dms., 250-lb lots, dlvd E. lb. 1.80 - —
fib dms. smaller lots, dlvd E lb. 2.10 - —
o-Phenylphenol dms. t.c.l. works. lb. .48 - .50
p-Phenylphenol, bgs. c.l. works lb. .38½- —
bgs. t.c.l., works lb. .43 - —
Phloroglucinol, comi., fib dms., works lb. 6.40 - —
CP, bots., works lb. 17.75 - —
Tech., fib dms works lb. 10.45 - —
Phloxin red toner (see Eosin red toner).
Phosgene, ref. cyls. works lb. 15½- —
Phosphate defluorinated (see under D).
Phosphate rock, Curacao, Atlantic ports New Orleans ton. 46.50 - —
Phosphate rock, Florida, land pebble, run-of-mine, washed, dried, unground, 66-68%, b.p.l., bulk, c.l., mines. short-ton. 5.22 - 5.629
68-70%, b.p.l., bulk, c.l., same basis short-ton. 6.08 - 6.089
70-72%, b.p.l. bulk, c.l., same basis short-ton. 6.66 - 6.669
74-75%, b.p.l., bulk, c.l., same basis short-ton. 7.56 - 7.569
76-77%, b.p.l., c.l., bulk, same basis short-ton. 8.45 - 8.459
Above Florida prices are based on fuel oil at 2.52 per bbl. and labor at $1.72.
Phosphoric acid, food grade, 75%, chys. c.l. works, E. frt. equald 100 lbs. 7.00 - —
chys., t.c.l., same basis 100 lbs. 7.25 - 7.75
tanks, t.w., works 100 lbs. 5.60 - —
80% chys. c.l. frt equald 100 lbs. 7.85 - —
chys., t.c.l., works 100 lbs. 8.10 - 9.35
tanks, t.w., works 100 lbs. 6.00 - —
NF 85%, chys., c.l. works. 100 lbs. 8.50 - —
chys., t.c.l., works 100 lbs. 8.75 - 9.00
tanks, t.w., works 100 lbs. 6.65 - —
Phosphorus, amorph., red, dms., t.l., works lb. .55 - —
dms., smaller lots, works lb. .56 - .57
white (yellow), solid, dms., c.l., works, frt. equald lb. .20 - .20½
dms., t.c.l. works, frt. equald lb. .21½- —
tanks, works, frt equald, lb. .19 - —
Phosphorus oxychloride, dms., c.l., works lb. .14 - —
dms., t.c.l., works lb. .15 - —
tanks, works frt equald lb. .12½- —
Phosphorus pentasulfide, powd., dms, c.l. works lb. .13½- —
dms, t.c.l. works lb. .14½- .15½
Solid, dms., c.l. works lb. .11½- —
dms, t.c.l. works lb. .12½- .13½
Phosphorus pentoxide, dms., c.l., works lb. .1375- .1475
dms, t.c.l. works lb. .1475- .1675
Phosphorus sesquisulfide, dms., cs., c.l., works lb. .38 - —
dms, t.c.l. works lb. .39 - .40
Phosphorus trichloride, dms., c.l., works lb. .14 - —
dms., t.c.l., works lb. .15 - —
tanks, works lb. .12½- —
Phthalic anhydride bgs, c.l., works, frt. equald lb. .15½- —
bgs., l.c.l., same basis lb. .16½- —
tanks, same basis lb. .15 - —
Phthalimide, 97-98%, dms., frt. alld lb. .65 - —
Phthalocyanine blue, full strength, bbls. dlvd E of Rockies. lb. 2.90 - —
Resinated, bbls., same basis lb. 2.75 - —
Water dispersable, bbls., same basis lb. 1.52 - —
Phthalocyanine blue prices 1c. higher W. of Rockies.
Phthalocyanine green, toner, bbls., works lb. 3.35 - —
Resinated, bbls. lb. 3.00 - —
Water dispersable, bbls lb. 1.71 - —
Phthalocyanine green prices 1c higher W. of Rockies.
Phthalylsulfacetamide, fib. dms., 1,000-lb. lots or more lb. 5.00 - —
NF fib dms lb. 5.20 - —
a-Picoline, dms. c.l. works, frt. equald lb. .46 - .48
dms., t.c.l., same basis lb. .46½- .49
tanks, same basis lb. .43 - .46
b-Picoline, 98% dms. t.l., works. lb. .65 - —
dms., t.c.l., same basis lb. .68½- —
tanks, same basis lb. .60 - —
b,g-Picoline, 5°C. dms., c.l., works. lb. .32½- —
dms., t.c.l., works lb. .33 - —
g-Picoline, tanks, f.o.b. works lb. .60 - —
dms., c.l., tl., same basis lb. .70 - —
dms., t.c.l., l.t.l., same basis lb. .73½- —
Picric acid, NF, bbls. lb. .85 - —
Tech., bbls. lb. .50 - —
Pigment green B, kgs lb. 1.55 - —
Pilocarpine hydrochloride, USP, bots oz. 4.78 - 5.25
Pilocarpine nitrate, USP, bots., vials. oz. 4.65 - 5.15
Pimento, Jamaican, bgs. lb. .69 - .72
Mexican, bgs. lb. .60 - —
Pimento berry oil, NF, dms. lb. 3.75 - 9.25
Pimento leaf oil, crude, cns lb. 2.50 - 2.60
Pine oil, dest.-dist., dms., t.c.l. works lb. .15 - —
dms. t.c.l. ex whse. New York. lb. .173 - —
Steam-dist. dms., ex whse. New York lb. .185 - —
dms., dlvd lb. .188 - —
Pineneedle oil, Siberian (see Abies Siberica oil).
Pink root, bls. lb. 2.50 - —
Piperazine anhyd., dms. c.l., frt. alld. E lb. 1.80 - —
dms., t.c.l., frt alld. E lb. 1.85 - —
Piperazine citrate, 36% dms., 1,000 lbs. or more, frt alld lb. 1.33 - —
Piperazine dihydrochloride, 51% dms. 1,000 lbs or more, frt alld lb. 1.29 - —
Piperazine hexanydrate, 44%, dms., 1,000 lbs. or more, frt. alld lb. .90 - —
dms., 200-900 lbs., frt. alld lb. .93 - —
Piperazine phosphate, 42%, dms., 1,000 lbs or more, frt. alld lb. 1.11 - —
Piperidine, dist., 98% min., a dms or more, t.c.l., t.t.l., f.o.b. works lb. 2.65 - —
1-4 dms., same basis lb 2.70 - —
dms., c.l., t.l., frt. equald lb 2.55 - —
Piperonyl butoxide dms. dlvd E lb 4.50 5.05

PITCHES
Pitch quotations are listed individually. For example, prices on Pitch, coaltar, may be found in the C's under Coaltar pitch.

Platinum metal, works oz. 81.00 85.00
Pleurisy root, bls. lb. .45 .50
Podophyllum resin, NF, dms lb. 12.50 15.50
Poke root, bls. lb. .19 .22
Polymyxin, bots., bulk., 50 billion units or more 1,000,000 units. .52 - —
bulk, bots., 25-50 billion units. 1,000,000 units. .54 - —
bulk, bots., 1-25 billion units. 1,000,000 units. .56 - —
Polyoxyethylene sorbitan monostearate, dms., 20,000-lb. lots, works lb. .42 - —
dms., 10,000-20,000-lb lots, works. lb. .44 —
dms. smaller lots, works lb. .47 .49
Polyoxyethylene sorbitan tristearate, dms., 20,000-lb lots, works lb. .42 —
dms., 10,000-20,000-lb lots, works lb. .44 —
dms., smaller lots, works lb. .47 .49
Poppy seed, Argentine, bgs. lb. No stocks.
Dutch, bgs. lb. .12 - —
Danish, bgs. lb. .10 - —
Polish, bgs. lb. .11 - —
Turkish, bgs. lb. .11 - —
Potash, caustic, liq., 45% basis, dms., c.l., works 100 lbs 4.25 - —
dms., t.c.l., same basis 100 lbs 5.25 - —
tanks, same basis 100 lbs 3.70 - —
Potash, reg., flake, 88-92%, dms., c.l., reg., flake, 88-92% dms c.l. same basis 100 lbs. 9.55 - —
dms., t.c.l., same basis 100 lbs 11.05 - —
solid, 88-92%, dms., c.l., works 100 lb. 9.10 - —
dms. t.c.l., works 100 lbs. 10.60 - —
Potassium acetate, NF, 200-lb dm. f.o.b works, E lb .31 - —
Potassium bicarbonate, USP, gran., dms lb. .22 - —
powd., dms lb. .24 - —
Potassium bichromate, gran. bgs., c.l., t.l., works lb. .18 —
bgs. t.c.l., works lb. .18½ 19¾
Potassium bichromate in dms ¾c. higher.
Potassium bitartrate, NF, gran., powd. 100-lb bgs., c.l., frt. equald lb. .37 - —
100-lb bgs. 5,000 lbs. l shipt., same basis lb. .38 - —
100-lb bgs. smaller lots, same basis lb. 40 - —
Potassium borohydride, powd dms., works lb. 16.00 22.00
Pelletized potassium borohydride $1.25 per lb. higher in 1,000-lb lots
Potassium bromate, 200-lb dms., c.l., frt alld lb. .49 —
Potassium bromide, USP, gran., bbls. kgs lb. .39 .40
Potassium carbonate, dom. NF, gran., bbls., dms lb 22 .24
Dom. tech. powd., bbls., dms lb 21 .22
Dom. calcinated, bgs. c.l. works 100 lbs. 8.50 - —
bgs., t.c.l. same basis 100 lbs 9.55 - —
Dom. hydrated, 83-85%, bgs. c.l., works 100 lbs 7.10 - —
bgs. t.c.l. works 100 lbs 8.15 - —
Potassium chlorate cryst. dms., c.l., works lb. .12¼- —
dms., t.c.l., works lb. .13½- .14½
Powd., dms., c.l., works lb. .12¾- —
dms. t.c.l. works lb. .14 .15
works lb. .12¼- —
Potassium chlorate, NF, cryst., dms., 2,000 lbs. or more, works lb. .16¾- —
NF, gran., 25-lb metal dms lb. .36 —
NF powd. dms., 2,000 lbs. or more works lb. 17¼- —
Potassium chloride, indust., 99.9% KCL, bulk, c.l., works ton 29.00 - —
bgs., c.l., works ton 30.00 - —
99.3% KCL bulk, c.l., works ton. 28.00 - —
bgs., c.l., works lb 35.00 - —
USP, cryst., dms lb. 33.00 - —
USP, gran., dms. lb. .21 - .23
USP, powd., dms. lb. .24 - .26
Potassium chloride, agricultural (see Potassium muriate)
Potassium chromate, tech., dms., works lb. .50 .51
Potassium citrate, NF, gran. 250-lb. dms., f.o.b. works E lb. .43 - —
powd. 250-lb dms. same basis. lb. .46 - —
Potassium cyanide, dms., 20,000-lb. lots or more, divd. E lb. .42½- —
dms., 5,000-19,999-lb. lots, works lb. .43 —
dms., 2,000-4,999-lb. lots lb. .43½- —
dms., 1,999-lb. lots or less lb. .44½- .46½
Potassium dichromate (see Potassium bichromate).
Potassium ferricyanide, dms., ton lots, works lb. .50 —
dms. smaller lots works lb. .65 —
Potassium ferrocyanide, dms., ton lots lb. 24½- —
dms. smaller lots lb. 29 - —
Potassium fluoborate, fib dms., c.l., works lb. .30 —
fib dms. t.c.l., works lb. .31 —
Potassium fluoride, dms., works lb. 36 .37
Potassium gluconate, 100-lb dm., f.o.b. works E lb. 1.07 - —

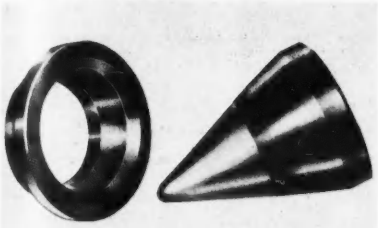
U.S.I. CHEMICAL NEWS

November A Series of Advertisements for the Chemical Process Industries 1961

Hard Carbides Answer Need For More Rugged Materials In Chemical Processing

The hard carbides, particularly those of tungsten and titanium, are becoming more firmly established as materials for critical components in chemical processing equipment. Increased application is expected because these carbides have properties that cannot be equalled by other structural materials.

These hard carbides have high wear



Valve components of hard carbides had 20 times service life of second best material in regulating pressure drop of 900F gases carrying aluminum oxide catalyst.

and corrosion resistance, excellent rigidity, high strength, and high-temperature properties. Thus they reduce maintenance, increase operating efficiency and even make new processes possible by permitting higher combinations of temperature, pressure, flow rate or volume.

Chemical Applications

Among current chemical industry applications for hard carbides are nozzles for such equipment as centrifuge separators, drying towers, emulsifiers; valves for reci-

(Continued on next page)

UDMH Data Published

Comprehensive data on unsymmetrical dimethylhydrazine (UDMH) have been compiled in a two-page article appearing in a recent issue of *Chemical Engineering Progress*.

The paper, written by Louis H. Diamond of FMC Corporation, covers physical properties, manufacturing processes, purification methods, storage and handling, materials of construction that can be used with UDMH, and its propellent applications. FMC Corporation is a partner with U.S.I. in a new plant to produce UDMH in multi-million pound quantities.

For a reprint of the paper, write Technical Literature Dept., U.S.I. Chemical News, 99 Park Ave., New York 16, N. Y.

Stabilization, Valve Developments Broaden Aerosol Markets

Propellant Additive Stabilizes Alcohol-Based Products; New Valve System Opens Way for Aerosol-Dispensed Anti-Perspirants

Recent advances in aerosol technology reportedly eliminate problems in pressure-packaging two important classes of products: alcohol-based formulations and anti-perspirants. Nitromethane has been found to be effective in stabilizing alcohol-containing aerosols against metal container corrosion. And a new non-metallic valve and closure has been designed which minimizes clogging caused by drying out of aluminum salts used in most anti-perspirant and deodorant formulas.

Both developments are seen as broadening the market for aerosols. Up to now, for example, the corrosive action of personal product formulas containing alcohol with propellant 11 has generally precluded packaging in aluminum containers. Aerosols have not made any dent in the anti-perspirant field, which represents an estimated market in excess of 93 million packages with a retail sales value of over $95 million.

Free Radical Inhibition

The development of an effective stabilizing agent for alcohol-based aerosols resulted from extensive research. An early premise was that hydrolysis was the cause of corrosion. But tests revealed that the distortion of odor, development of acidity and, ultimately, corrosion of the container were due to a free radical reaction of trichlorofluoromethane, or propellant 11, with ethanol. This has been substantiated

(Continued on next page)

New Composite Polyethylene Container Saves Money For Chemical Company

Polyethylene drums with wirebound overwraps have reduced initial container costs 60 per cent and lowered overall packaging, handling and shipping costs for a major chemical distributor.

Where possible, the company switched from 13-gallon glass carboy cases to relatively inexpensive composite containers for chemicals. The new packages consisted of 15-gallon polyethylene drums in octagonal protective wirebound overwraps.

In addition to savings on initial container costs, the new containers increased pallet capacity by over 125 per cent in gallonage and doubled it in number of containers. They also reduced storage area requirements since pallets could be high-stacked. This was made possible by designing the overwrap so that the protruding neck of the polyethylene drum is just below the level of the end cleats. And shipping container tare weight was cut from a previous 70 pounds to 15.5 pounds, with comparable savings in shipping charges.

Photo courtesy E. I. du Pont de Nemours & Co. Inc.

Corrosion control by nitromethane shown by two aerosol cans subjected to same tests. Can at left contained alcohol/propellant 11; at right, alcohol/propellant 11 plus nitromethane.

National Distillers, Cerro Join in Primary Aluminum Feasibility Study

Cerro Corporation and Bridgeport Brass Company Division of National Distillers and Chemical Corp. have announced a joint study of the feasibility of an aluminum reduction plant of 56,000 tons annual capacity at Wauna, Oregon.

Though a decision whether to undertake the project will be made on completion of the study and on a satisfactory arrangement for financing, a 20-year contract for 90,000 kw of electrical power already has been signed by Cerro.

The proposed plant will employ the conventional aluminum electrolytic reduction process and use prebaked carbon electrodes produced at the site. U.S.I.'s extensive background in the technology of metals reduction will make important contributions to the study.

Hard Carbides (Continued)

procating pumps and use in pressure-relief, pressure-regulating, flow-regulating or other service; seats, stem rods and impact rings of homogenizers; seals and rings; pump bodies and components; liners for steel cylinders for compressed petroleum gases.

Powder-Metallurgy Materials

Hard carbides are powder-metallurgy products, made of the carbides of refractory metal elements, combined with a lower melting-point matrix material. Most common of these is tungsten carbide, cemented with varying amounts of cobalt. Composition is varied by adding the carbides of titanium, tantulum, niobium and chromium. These modify properties to meet particular operating conditions.

Six basic types are available for process-industry components:

- Straight tungsten carbide-cobalt, with properties named above.
- Tungsten carbide-cobalt with TiC, TaC, NbC to improve gall resistance or high-temperature properties.
- Titanium-base carbides with nickel or nickel-molybdenum binders for light weight, resistance to high-temperature oxidation, greater strength at 1800F and above, and high stiffness-to-weight ratio.
- Tungsten carbide with chromium-cobalt binders for combinations of moderate corrosion and wear.
- Tungsten carbide with platinum binder for extremely corrosive conditions involving some wear.
- Binderless carbides of tungsten and tantulum for the ultimate in wear and corrosion, but limited strength and impact resistance.

Aerosol Developments *(Continued)*

in U.S.I.'s research laboratories. The reaction:

$$CCl_3F + CH_3CH_2OH \longrightarrow CHCl_2F + CH_3CHO + HCl$$

Although it was established that air can retard the degradation process, this attack on the problem had drawbacks. Further investigations proved that nitromethane, added as a 0.3% solution in propellant 11, filled all the requirements. Such a stabilized propellant mixture, now commercially available, is believed to be compatible with most non-pharmaceutical aerosol products now on the market.

Use of the new stabilized propellant formulation appears especially advantageous for such aerosols as hair sprays and other personal products, room deodorants, and plant sprays. Government approval will be required before pharmaceutical products utilizing it can be sold.

Details of Valve System

The new, non-clogging valve system features a self-sealing cap, which acts as a "cork" for the aerosol package between uses—thereby minimizing crystallization of the aluminum salts.

Outside, the cap looks like any other. The clue to its effectiveness is inside. It's tapered to seal against the sides of the toggle-type actuator, and it has a projection which fits snugly into the spray orifice. In addition, ribs along the inner sides snap onto the valve cup. Both actuator and closure are made of low-density polyethylene.

The valve, also non-metallic, is said to produce an unusually fine spray and reduce the "chill" associated with aerosols. The system is expected to be used with adhesives, as well as anti-perspirants.

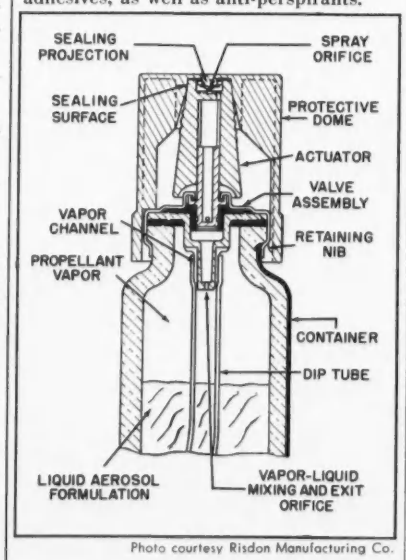


Photo courtesy Risdon Manufacturing Co.

New aerosol valve and closure developed for packaging anti-perspirants.

TECHNICAL DEVELOPMENTS

Information about manufacturers of these items may be obtained by writing U.S.I.

Two new anionic surface-active agents, alpha-sulfopalmitic and alpha-sulfostearic acids, are available in pilot plant quantities. Among applications are detergents (including bars), greases, flotation agents. **No. 1770**

Three new synthetic rubber developments have recently been described: ethylenepropylene rubber, a promising tire material; *trans*-1, 4-polyisoprene, a synthetic balata; and an improved method for making vinyl pyridine compounds. **No. 1771**

New preparative gas chromatograph lets chemist prepare ultra-pure organics without lengthy analytical distillations or separate samples of up to 10 ml and recover separated components for further study. **No. 1772**

Translation of chemical names into molecular formulas has been accomplished by electronic computer, using a newly constructed grammar of chemical nomenclature. Seen as aid to classifying, indexing, teaching nomenclature. **No. 1773**

Adjustable-flow polyethylene bottle for hydrofluoric acid has patented closure which lets user "dial" the rate of flow—from a single drop to steadily controlled stream. One-pound container has slip-on dust cover. **No. 1774**

Two new groups of surfactants have been developed: high-molecular-weight heterocyclic nitrogen compounds (fatty imidazolines) and a water-soluble amphoteric series. Uses are in cosmetics, textiles, drugs, metals and petroleum. **No. 1775**

Vanadium trichloride (98+% pure) and vanadium tetrachloride (95+% pure) have been introduced in pilot plant quantities. Suggested uses include catalysts, organometallic intermediates, production of high-purity metals and intermetallics. **No. 1776**

Soviet research papers on electrolytes will be sold in a 110-page English translation. A collection of 21 papers covering electrochemistry of molten and solid electrolytes, the volume includes new data and methods. **No. 1777**

New metal plating compounds are applied by brush, spray or immersion without electric current. Said to give aluminum corrosion protection and decoration superior to anodic and conversion coatings. For wide range of metals. **No. 1778**

Non-separating benzoyl peroxide paste is now being offered in an improved formulation. Said to have these advantages as polymerization catalyst over standard formulations: fire resistance, even consistency, complete homogeneity. **No. 1779**

Please use number when writing.

U.S.I.

U.S. INDUSTRIAL CHEMICALS CO.

Division of National Distillers and Chemical Corporation

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Potassium guaiacol sulfonate, NF, dms lb. 2.10 - 2.30
Potassium hydroxide, tech. (see Potash caustic).
Potassium hydroxide, USP, pellets, 100-lb dms. 1 to 100-dm. lots lb. .33½ - .38
Potassium hypophosphite, NF, fib. dms., 1,000-lb. lots lb. 1.38 - —
Potassium iodide, USP cryst., gran., 250-lb. dm., f.o.b. works lb. 1.55 - —
Potassium manure salt, min. 20% K₂O, bulk, c.l., works, unit-ton. .17 - .1765
Potassium metabisulfite, gran. dms., lb. .16 - —
Powd., dms lb. .27 - —
Potassium muriate, standard, bulk, c.l., works unit-ton. .37 - .39
bagged 60% minimum K_2O, same basis ton.27.20 -28.40
Potassium muriate, gran., bulk, c.l., works unit-ton. .40 - .41
bagged, 60% minimum K_2O, same basis ton.29.00 -30.20

Inside prices apply to material contracted for prior to July 1, 1961.

Outside prices apply to material contracted for after that date but also for delivery during the current month

Potassium nitrate, NF, cryst., bbls., 20-ton lots 100 lbs.17.00 —
bbls., smaller lots 100 lbs.18.00 -19.00
gran., bgs., 20-ton lots 100 lbs. 9.50 —
bgs., smaller lots 100 lbs.11.00 -12.00
powd., bgs., 20-ton lots 100 lbs.10.50 —
bgs., smaller lots 100 lbs.12.00 -13.00
Potassium oxalate, neutral, tech., fine gran., powd., 300-lb. dm. f.o.b works E lb. .32 - —
Potassium pentaborate, gran., dms., c.l. works ton.219.50 - —
dms., ton lots, ex whse 100 lbs.17.48 - —
dms., smaller lots, ex whse 100 lbs.18.73 - —

Powdered potassium pentaborate $10 per ton higher.

Potassium perchlorate, dms., c.l., works lb. .18½ - —
dms. l.c.l., works lb. .19 .20
Potassium permanganate, coml., kgs., works lb. .25 .33
USP, dms., works lb. .29 .35
Potassium pyrophosphate, tetrabasic, dms., works lb. .1475 .1575
Potassium prussiate red (see Potassium ferro-cyanide)
Potassium prussiate yellow (see Potassium ferro-cyanide).
Potassium silicate, electrical grade, 30° Be. 1:2.0, dms., c.l., works 100 lbs. 6.50 - —
dms., l.c.l., 5 dm. lots or more, works 100 lbs. 7.25 - 7.65
tanks, works 100 lbs. 6.15 - —
40.5° Be 1:2.1, dms., c.l., works. 100 lbs. 5.95 - —
dms. l.c.l., 5 dm. lots or more, works 100 lbs. 6.70 - —
tanks, works 100 lbs 5.60 - —
Glass grade, bgs., c.l., works 100 lbs. 17.30 -18.00
bgs., l.c.l., works 100 lbs.17.80 - —
Soln., 29° Be. 1:2.5, dms., c.l., works 100 lbs. 4.95 - —
dms. l.c.l., 5-dm. lots or more, works 100 lbs. 5.70 - —
tanks, works 100 lbs. 4.60 - —
Potassium silicofluoride, bgs., works. lb. .09½ - .10

Potassium silicofluoride in drums, 0.4c per lb higher

Potassium stannate, dms., frt. alld. lb. .878 - .950
Potassium sulfate, min. 50% K_2O, agricultural, bulk, c.l., works unit-ton. .70½ - .72½

Inside price applies to tonnage contracted for prior to July 1, 1961.

Outside price applies to tonnage contracted for after that date but also for delivery during the current month

Potassium sulfate NF VII, cryst., dms., lb. .31 - .33
NF VII, gran. 400-lb. dm lb. .18 - —
NF VII, powd. 400-lb dm lb. .17 - —
Potassium sulfocyanate, NF, cryst., (see Potassium thiocyanate).
Potassium thiocyanate, NF, cryst., dms., works lb. .96 .98
Tech., dms., works lb. .77 .79
Potassium titanate, ctns. c.l., works. lb. .16¼ - —
ctns., 5-ton lots, works lb. .16½ - —
ctns., 1-ton lots or less, works lb. .16¾ - —
Potassium-magnesium sulfate, basis 40% K_2SO_4 and 18% MgO, bulk works, base price, ton.13.45 - —
bulk, works, July forward ton.14.00 - —
Potassium-sodium tartrate, NF gran. or powd., 250-lb. dms., c.l., works E lb. .42½ - —
250-lb. dms. 5,000-lb. lots, same basis lb. .43 - —
250-lb. dms., same basis lb. .43½ - —
Potassium-titanium fluoride, fib. dms., works lb. .39 .40
Potassium-zirconium flouride, fib. dms., c.l., works lb. .50 - —
fib. dms., l.c.l., works lb. .52½ - .55
Pregnenolone, bots. gram. No prices.
Pregnenolone acetate, bots. gram. No prices.
Procaine hydrochloride USP, antibiotic grade, dms., 2,000-lb. lots, frt. alld. lb. 2.10 - 2.25
Procaine hydrochloride, USP, ampule grade, dms., 1,000-lb. lots, frt. alld lb. 2.40 - —
dms., 500 lbs lb. 2.45 - —
dms., 100 lbs lb. 2.50 - —
Progesterone, USP bots gram. No prices.
Pregnenolone acetate bots gram. No prices.
Propenyl guaethol dms lb.24.30 -27.00
b-Propriolactone tech., dms., c.l., f.o.b. works lb. .47½ - —
dms., l.c.l., t.t.l., same basis lb. .48½ - —
tanks, same basis lb. .45 - —
Propionic acid syn. pure, dms., c.l., dlvd lb. .23¼ - —
dms., l.c.l., dlvd. lb. .24¾ - —
tanks, dlvd lb. .20¾ - —
n-Propyl acetate, dms., c.l., dlvd. lb. .14¾ - —
dms., l.c.l., dlvd lb. .16¼ - —
tanks, dlvd lb. .12¼ - —
n-Propyl alcohol, dms., c.l., dlvd lb. .14 - .15
dms., l.c.l., dlvd lb. .15½ - .16½
tanks, dlvd lb. .11½ - .12½
n-Propyl gallate, dms., 100 to 2,000-lb lots, works lb. 3.90 4.40
n-Propyl-p-hydroxybenzoate, USP, dms lb. 2.30 - 2.40
Propyl thiouracil bots., 50 kilo lots or more kilo.55.00 —
bots., smaller lots kilo.55.10 -55.30
n-Propylamine dms., c.l., dlvd lb. 1.24 —
dms., l.c.l. same basis lb. 1.255 - —
n-Propylene dichloride, consumers', dms., c.l., dlvd. E lb. .0845 - —
dms., l.c.l., same basis lb. .0995 - —
tanks same basis lb. .07 - —

Propylene dichloride prices in West 1c. higher, same basis.

Propylene glycol, indust., dms., c.l., dlvd. E lb. .15 - —
dms., l.c.l., same basis lb. .16¾ - —
tanks, same basis lb. .12½ - —
USP, dms., c.l., dlvd. E lb. .17 - —
dms., l.c.l., same basis lb. .18¾ - —
tanks, same basis lb. .14½ - —
Propylene glycol methyl ether, dms., c.l., dlvd lb. .20 - —
dms., l.c.l., same basis lb. .21 - —
tanks, same basis lb. .18½ - —
Propylene oxide dms., c.l., dlvd E, lb. .17 - —
dms., l.c.l., dlvd. E lb. .18½ - —
tanks, dlvd. E lb. .14½ - —
Psyllium seed, black, bgs. lb. .42 - .45
Blonde bgs. lb. .18 - .20
Husks, bgs. lb. .45 - .48
Pumice, dom., grd., coarse to fine, 0, ½, 1, 1½, 2, 3, bgs., ton lots lb. .03¾ - .04¼
bgs., smaller lots lb. .03⅞ - —
Imp., Italian, silk-screen, coarse, bgs., ton lots lb. .06½ - —
fine, bgs. ton lots lb. .04 - —
sun dried, coarse, bgs ton.60.00 —
fine, bgs. ton.60.00 -70.00
Pumpkin seed, bgs lb. .25 .26
Pyrethrins, syn (see Allethrin).
Pyrethrum flowers, fine grd. 0.9% pyrethrins, bgs., ton, works lb. .50 - —
Powd., 1.3% pyrethrins, bgs., ton works lb. .71 - —
Pyrethrum liquid, 20/1 basis (2 grams pyrethrins per 100cc odorless base) dms. works, gal. 9.60 - 9.80
100/1 basis (10 grams pyrethrine per 100cc odorless base), dms., works gal.45.90 -46.90
Pyrethrum oleoresin, dewaxed 20%, dms., works lb.11.00 -11.35
purif. 20%, dms., works lb.11.00 -11.35
Pyridine, denat., dms. c.l., works and frt. equald gal. 2.77 - —
dms., l.c.l., same basis gal. 2.80 - —
Refd., 2°, non-ret. dms., c.l., same basis lb. .75½ - —
dms., l.c.l., same basis lb. .76 - .76½
tanks, same basis lb. .71 - —
Potassium persulfate, dms., c.l., works lb. .17½ - —
dms., l.c.l., works lb. .18 - .21
Pyridoxine hydrochloride, USP, dms., f.o.b. works kilo.90.00 - —
Pyrites, Canadian, 48-50% S, mines, long-ton. 4.50 - 5.00
Pyrocatechol (see Catechol).
Pyrogallic acid, NF (see Pyrogallol).
Pyrogallic acid, tech., bbls., 100-lbs., f.o.b., works lb 3.50 - —
Pyrogallol, NF 100-lb dms. lb 3.50 - —
Pyroxylin, USP, bots lb. 9.50 - —

Q

Quassia chips lb. .10 - —
Quicksilver (see Mercury metal)
Quince seed, bgs lb. 1.55 - 1.75
Quinidine sulfate, USP, 1,000-oz. dm oz. .78½ - —
Quinine, NF, 1,000-oz. dm. oz. .3750 - —
Quinine bisulfate USP, 1,000-oz. dm. oz. .28 - —
Quinine hydrochloride, 1,000-oz dm. oz. .3650 - —
Quinine sulfate, USP, 1,000-oz dm. oz. .3150 - —
Quinoline dms., c.l., frt. equald lb. 50¾ - —
dms., l.c.l., same basis lb. 51¼ - —
tanks, same basis lb. .50 - —

R

R salt paste, dms., c.l., t.l., frt. alld., 100% basis lb. .98 - —
Powd., dms., c.l., t.l., frt. alld, 100% basis lb. 1.08 - —
Rapeseed oil, dms lb. .17½ - .17¾
tanks lb. .15½ - —
Rare earth oxalate, NF, 45-50%, bgs. works lb 1.15 —
Rauwolfia serpentina root powd., bbls. dms lb. 1.00 1.20
Red carmine, No. 40 (see Carmine).
Red oil (see Oleic acid)

RED PIGMENTS

Red pigment quotations are listed individually For example, prices on Red, lithol toner, may be found in the L's under Lithol red toner

Red precipitate (see Mercuric oxide, red).
Red toner, Lake C, alizamine, bbls., works lb 1.30 - —
Reserpine, cryst. bots gram 1.25 - —
Resorcinol, tech grade, bgs., c.l., works, frt equald lb. 77½ - —
bgs., l.c.l., same basis lb. .78½ - —
Resorcinol in dms., 1c. per lb more.

Uncover extra flavor!

Use Exchange Orange Oil, U.S.P., California Cold Pressed. It delivers more of everything. More flavor. More aroma. More uniformity.
And only the Sunkist Growers, with the world's largest stocks of fuller-flavored California oranges, could produce an oil with such consistent flavor balance.
Always look for "Exchange" on the tamper-proof container seal—it's the acknowledged standard of the industry for absolutely dependable oil—100 per cent natural!

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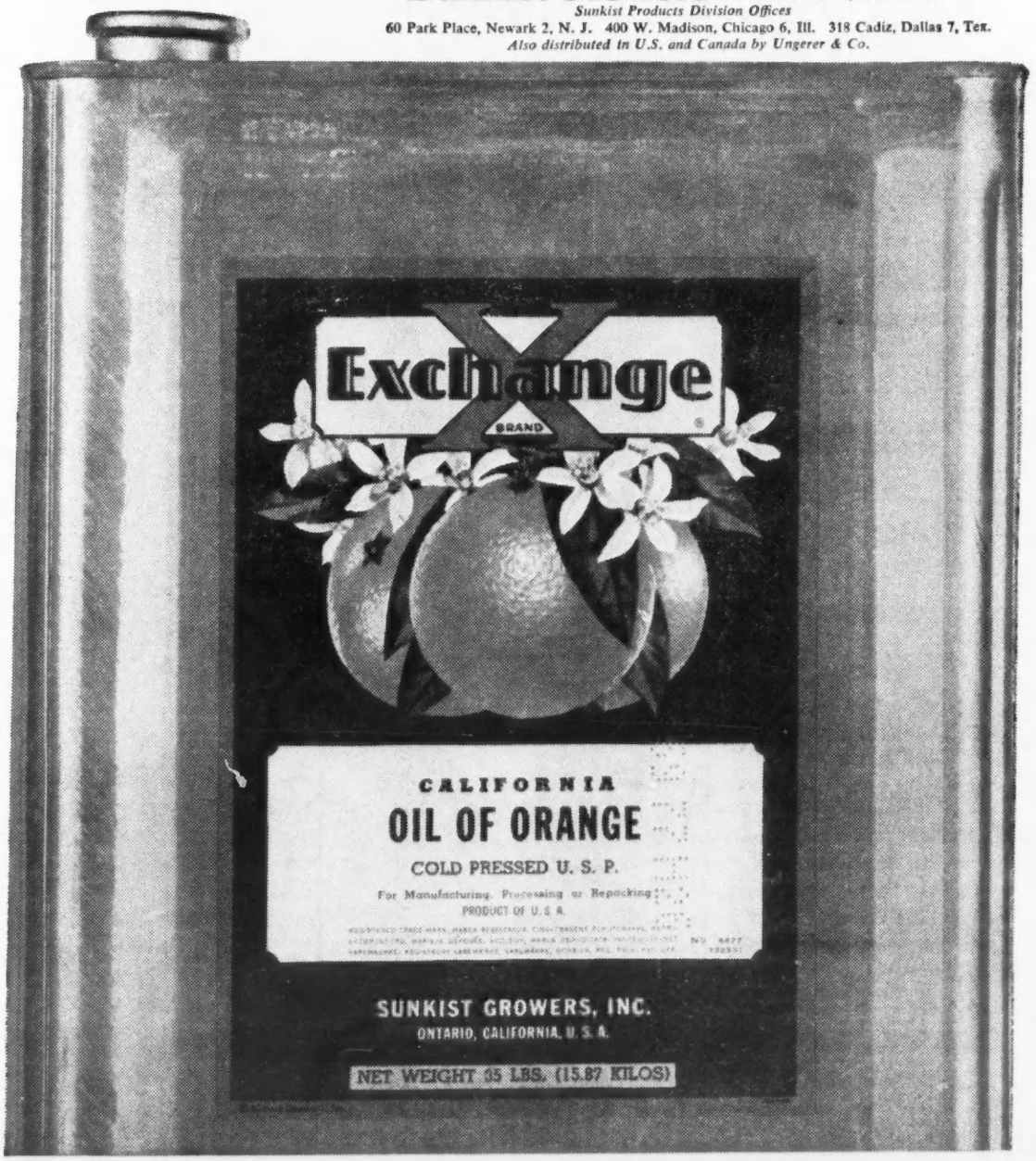

Resorcinol Monoacetate—Sodium-Ammonium Phosphate

Resorcinol monoacetate, NF dms. lb 2.50 —
USP. powd., dms., works lb 2.95 —
Rhatany root, bgs lb .14 .16
Rhodamine red toner, molybdated, PMA kgs. works lb 6.00 —
Tungstated PTMA works. kgs lb 6.60 —
Rhodinol, 5-lb cans lb 42.00 51.00
Synthetic lb 14.00 16.00
Rhubarb root, india, whole, bgs lb 25 —
powd. bgs lb .35 —
Riboflavin USP fib dms., kilo or more. dlvd kilo.36.00 - —
Riboflavin-5 phosphate-sodium, t.b. dms. kilo or more. dlvd. kilo.104.70 - —
Rice bran oil, clarified, dms. t.c.l. lb. .15½- —
tanks, dlvd. E lb. .14 —
Ricinoleic acid (see Castor oil acids split).
Rochelle salt (see Potassium-sodium tartrate)
Roofing pitch (see Coaltar pitch, roofing).
Rose oil, nat., Bulgarian, bots lb 1,152.00- —
Turkish, bots., otto lb.600.00 -700.00
absolute lb.145.00 —
Rosemary oil, Spanish NF, cns., dms lb 1.15 1.20
Spanish, tech., cns., dms lb. 80 95
Rosin gum and wood (see Naval Stores in Protective Coatings market)
Rotenone, fib dms., works unit-lb. .10½- —
Resin 25-45% fib dms. works. unit-lb. .10½- —
Rottenstone, bgs. 5-ton lots, ex-whse lb. .03¾ —
bgs ton lots same basis lb .04¼ —
Rubber solvent petroleum, 115°-F-245°F b.r., tankcars, New Jersey and New York gal. .19 —
Group 3 gal. .13875 —
Houston Texas gal 155 —
Rue oil, nats lb 2.75 3.00
Rutin NF fib dms. 10 kilo lots. kilo.11.00 - —
fib dms. 5 kilo lots kilo.11.50 - —
fib dms. 1 kilo kilo 13.00 - —
Ryania 100% powd., bgs., c.l., works lb .22 —
bgs., l.c.l. same basis lb .24 —

S

S acid, bbls. works lb 3.25 —
Sabadilla seed activated, ground with lime bbls lb. .42 .44
Saccharin calcium, fib dms. 1,000-lb lots. works lb 2.50 —
Saccharin, USP, gran. soluble, dms., 1,000-lb. lots lb 1.50 —
dms., smaller lots lb 1.60 - —
USP, powd. soluble dms., 1,000-lb lots lb. 1.55 - —
dms., smaller lots lb 1.65 - —
USP powd., insoluble, dms., 1,000-lb. lots lb 1.53 - —
dms., smaller lots lb 1.63 - —
Safflower oil, indust, dms., New York, lb. .21 - .2230
tanks, Atl. coast lb. .19 - —
Edible, dms., same basis lb. .2560- .2660
tanks lb. .2460- —
Saffron Mancha Superior, tins lb.19.50 —
Safrol dms lb 65 —
Sage, Dalmatian, bgs lb 40 —
Greek, cns. lb 15 —
Italian cns lb 18 —
Sage oil, clary, bots. lb.11.00 -12.00
Dalmatian cns lb 2.85 3.25
Spanish cns lb 1.25 1.75
Sal soda (see Soda sal).
Salicylaldehyde dms c.l., t.l., f.o.b. plant frt equald lb 1.23 —
same basis lb 1.25 —
Salicylamide 100-lb dms lb 1.05 —
Salicylic acid tech. fib dms., c.l., t.l., dlvd lb 40½ —
fib dms t.c.l. dlvd lb 44¾ —
USP, cryst., 200-lb. fib dms., 1,000 lbs or more lb 51¾- —
200-lb fib dms. less than 1,000 lbs lb 54¾ —
100-lb. fib. dms., 1,000 lbs. or more lb 53¾- —
100-lb fib dms. less than 1,000 lbs lb 56¾ —
USP, pwd., 100-lb. fib. dms., 1,000 lbs or more lb. .58¾- —
100-lb fib dms. less than 1,000 lbs lb 61¾ —
Salol, NF, gran., bbls. kgs lb 1.20 —
Powdered salol 25c per lb higher.
Salt rock, paper bgs. c.l 100 lbs 1.09 - —
Salt, table vacuum common, fine, paper bgs. c.l 100 lbs 1.34 - —
Saltcake, dom bulk, works, 100% Na_2SO_4 basis ton 28.00 - —
Saltpeter (see Potassium nitrate)
Sandalwood E Indian, chips, bgs., lb 55 .66
powd. fib dms lb 75 .76
Sandalwood oil, cns. lb.27.00 -30.00
Sarcosine tech. tanks, f.o.b. works, frt equald lb 1.03 —
lb No stocks
Sassafras oil, artif., dms lb. 45 —
Nat., dom dms lb 1.40 —
Savory oil cns lb 4.75 —
Schaeffer's salt paste, dms., frt alld 100% basis lb. .85 - —
Powd. bgs. frt alld. 100% basis. lb .95 - —
Scopolamine hydrobromide, USP, 10 oz. lots, bots oz.15.00 - —
Sebacic acid CP bgs. c.l., works lb. .69½- —
bgs., l.c.l., works lb 71½ —
Purified, bgs c.l., works lb. 65½ —
bgs., l.c.l., works lb. 67½ —
Seidlitz mixture fib dms. 5,000-lb. lots lb 30½ —
fib dms. smaller lots lb. .31 .33
Selenium powd., 99½%, dms., dlvd lb. 6.50 - —
Senega root, bls. lb. 2.65 - —
Senna leaves, Alexandria, whole and half, bls lb. .20 - .22
siftings lb. .16 - —
Tinneveley, No. 1, bls. lb. .26 - .30
No. 2, bls lb. .18 - —
No. 3, bls lb. .14 - —
pods, bls. lb 28 - —
powd. bbls., bxs lb 17 - —
Serpentaria root, bls lb. 7.00 - 7.50
Sesame oil, USP, dms., t.c.l lb .37 .38
Sesame seed, Colombian, bgs lb. 15½- —
Lebanese, hulled, bgs lb .19 —
Nicaraguan, hulled, bgs lb. 21 - —
nat., bgs. lb. 15 - —
Salvadorian, Nat. bgs lb .16 - —
Shellac, bleached, bonedry, bgs., 1,500-lb. lots lb. .46 - —
bbls., 1,500-lb. lots .47 - —
Bonedry shellacs prices for less than 1,500-lb lots 1c per lb higher for all packages.
Shellac, bleached, refd., bgs., 1,200-lb. lots lb. .56 —
bgs., less than 1,200-lb. lots lb. .57 - —
Shellac orange lemon No 1, bgs., 10-bg. lots lb. .35 - .36
lemon No 2, bgs. 10-bg lots. lb. .34 - .35
superfine, bgs., 10-lb. lots lb. .32 - .33
Shellac in 1 to 10-bg lots 1c per lb more

Shingle stain oil tar distillate, dms. c.l., works gal. .37 - —
dms., t.c.l., works gal. .48 - —
tanks, works gal. .25 - —
Sienna pigment burnt, paper bgs., c.l., works lb. .06½ .18½
paper bgs t.c.l., works lb. .06¾ .17¾
Raw, paper bgs., c.l., works lb. .06¾ .16¾
paper bgs t.c.l., works lb. .07 .17
Silica, amorph, dry-grd 325 mesh bgs., c.l., works ton 25.00 —
bgs t.c.l works ex whse ton 45.00 55.00
Silica hard quartz 99½%, 325 mesh bgs c.l. works ton 20.00 —
bgs. t.c.l. works ton 25.00 —
99½% 140 mesh bgs., c.l. works ton 15.00 - —
bgs. t.c.l. works ton 20.00 - —
Silicon tetrachloride tech. dms., c.l., works lb. .20 - —
tanks, works lb. .15 - —
Silver bullion ingots, as Prov oz. .91⅛ —
Silver cyanide bots. 1,000-oz lots, oz. .94¾ —
bots. 500-oz lots oz. .95¼ —
bots. 100-oz lots oz. .96¼ —
Silver nitrate CP cryst., bots., 1,000 to 4,000 oz., f.o.b. works oz. .67¼ —
bots 250-500 oz. same basis. oz. .67¾ —
USP granular silver nitrate 4c per oz higher
Silver proteinate mild, USP, 16-oz. bots oz 1.46 —
Snakeroot oil, Canada, cns lb.40.00 43.00
Soapbark, crushed, bls. lb. .40 —
Powd., bls. lb. .50 - —
Whole, bls. lb. .30 - —
Soda ash dense, 58%, paper bgs., c.l., works 100 lbs 1.90 —
paper bgs. t.c.l. stock pts. 100 lbs 3.00 4.77
bulk, c.l. works 100 lbs 1.60 —
Soda ash, light, 58%, paper bgs., c.l., works 100 lbs. 1.85 - —
paper bgs. t.c.l. stock pts. 100 lbs 1.55 —
bulk, c.l. works 100 lbs 3.95 4.72
Soda caustic, flake 76%, dms. c.l. works, frt equald 100 lbs 5.20 —
liq. 50% sellers tanks works, dry basis 100 lbs 2.90 —
50% rayon type sellers tanks works, dry basis 100 lbs 2.90 3.00
Liq. 73%, sellers' tanks, works, dry basis 100 lbs. 3.00 —
liq. 73% rayon type, sellers tanks, works, dry basis lb 3.00 3.10
solid 76% dms. c.l. works, 100 lbs 4.80 —
Soda sal. conc. bgs. c.l. works 100 lbs 2.50 - —
bgs. smaller lots. works 100 lbs 2.80 - —
Sodium acetate annyd. bgs., c.l., dlvd E lb. .14½ —
bgs., t.c.l., same basis lb .16½ - —
NF 60% gran. dms. c.l. works, lb. 15½ —
dms t.c.l. works lb. 17½ —
Sodium alginate, NF, white powd., dom 300 lbs or more lb. 1.02 —
Sodium p-aminosalicylate dms. 100-lb lots or more, frt, adjusted lb 1.90 —
Sodium antimoniate bgs. c.l. dlvd. E lb. 27½ —
bgs t.c.l. dlvd E lb. 29 —
Sodium arsenate 60% arsenic pentoxide. 200 lb. dm less than ton lots. f.o.b. works lb. .24 —
ton lots or more same basis. lb. .23½- —
Sodium arsenite, 94% soluble pink powder, 75% arsenous oxide, dealers. 100-lb dms., ton lots or more, f.o.b., works lb. .18½- —
1,600-1,900 dms. same basis lb. 19 - —
100-500 dms same basis lb. 20 - —
Sodium ascorbate dms., 100-kilos., dms., f.o.b. works kilo. 5.60 - —
less than 100-kilos kilo. 5.85 - —
Sodium benzoate tech, dms. c.l., t.l. frt alld lb. .35 - —
dms t.c.l same basis lb. 39 - —
USP, 100-lb. dms., ton lots, same basis lb. .43 - —
100-lb. dms., 1,000-lb lots, same basis lb. .45 - —
Sodium bicarbonate USP, gran., bgs., c.l. works 100 lbs 2.95 - —
bgs. t.c.l. works 100 lbs 3.85 - —
USP powd., bgs c.l., works, 100 lbs 2.55 - —
bgs. t.c.l. works 100 lbs 3.45 - —
Sodium bichromate gran., bgs., c.l., t.l., works lb. .13 —
bgs. t.c.l. works lb. .13½- .14¾
Sodium bichromate in dms ¾c. per lb higher
Sodium bifluoride, fib. dms., c.l., works, frt equald lb. .19½- —
fib dms., t.c.l., same basis lb. .2025- —
Sodium bisulfate bulk c.l. works, 100 lbs 2.00 —
dms c.l., frt. equald 100 lbs 3.00 3.60
dms. t.c.l. frt equald 100 lbs 3.50 4.10
Sodium bisulfite annyd., bgs., c.l., works 100 lbs 5.00 —
bgs t.c.l., works 100 lbs 5.45 —
Soln., 35° bbls c.l., works 100 lbs 1.70 - —
bbls t.c.l works 100 lbs 2.20 - —
Sodium borate (see Borax)
Sodium borohydride powd., dms., c.l., works lb. 8.00 - —
dms., t.c.l., works lb.11.75 -14.00
stabilized water soln., 12% NaBH, 100% basis, tanks, works lb. 7.50 - —
dms., same basis lb.11.50 -13.00
Pelletized sodium borohydride $1 per lb higher in 1,000-lb lots.
Sodium bromide USP gran dms., works lb. .40 - —
Sodium carbonate cryst. monohydrated (see Soda sal)
Sodium carbonate monohydrated, bgs. t.c.l. works 100 lbs 3.50 - —
bgs., c.l. works 100 lbs 3.10 - —
Sodium carboxymethyl cellulose (see CMC).
Sodium chlorate cryst., 350-lb dms., c.l., works lb. .09 —
dms. t.c.l. works lb. .09½- .10½
Sodium chlorate in 100-lb. dms., only, ¼c per lb higher
Sodium chloride (see Salt).
Sodium chloride, USP gran. bgs. lb. .05 - —
Sodium chlorite tech. dms., c.l., works lb. .58 - —
dms 20-dm lots or more works lb. .66 —
dms. smaller lots, works lb. 70 .73
Sodium chloroacetate, tech. dms., c.l., works lb. .27 —
dms. t.c.l. works lb. .28 —
Sodium chromate, anhyd. fib dms., c.l., t.l., works lb. .14¾ —
fib dms t.c.l. works lb. .15¼ - .16½
Tetrahydrate, bgs., c.l., t.l., works, lb. .1015- —
bgs. t.c.l. lb. .1065- .1190

Sodium citrate anhyd., 200-lb. dm., f.o.b works E lb. .62 - —
NF VIII, gran, bgs., c.l., same basis lb. .36 - —
USP XIV, gran., bgs., c.l., same basis lb. .29 - —
Sodium citrate, USP powd prices ½c higher.
Sodium cyanate dms. 1,000-lb. lots, works lb. .85 —
dms. smaller lots. works lb. .90 1.10
Sodium cyanide, briquettes or gran., 97 percent min., dms., dlvd., E of Rockies, 20,000-lb lots lb. .183 - —
dms., same basis, 5,000 to 19,999-lb. lots lb. .203 - —
dms., same basis, 2,000 to 4,900-lb lots lb. .208 - —
dms., same basis, 1,999-lb. lots and under lb. .218 - —
Sodium cyclamate 100-lb dm., f.o.b. works lb. 1.95 - —
Sodium diacetate, anhyd. 99-41% acetic acid. dms., c.l., works lb. .18 —
250-lb dms. c.l., works lb. .18¾- —
Tech 33-35% acetic acid, dms., t.c.l. works lb. .15 —
250-lb dms. t.c.l. works lb. .15¾- —
Sodium dimethyl dithiocarbamate, 40% soln. dms. c.l., t.l., frt alld., 100% basis lb .42 —
dms., t.c.l., t.t.l., same basis lb. .47 .52
tanks, same basis lb. .38 —
Sodium ferrocyanide, bgs., 10-ton lots lb. .13½- —
bgs. smaller lots lb. .14¾ —
Sodium fluoride white, 97% fib. dms., c.l., works, frt. equald lb. .1390- —
fib. dms., t.c.l., works, frt. equald lb. .1465- —
Sodium formate, bgs., c.l., works. 100 lbs. 7.05 - —
bgs. t.c.l., ex whse 100 lbs 8.65 - —
Sodium gentisate, 100-lb fib. dms. lb 5.50 - —
Sodium gluconate, refd., 250-lb. dm., f.o.b. works E lb .84 - —
Tech., bgs., c.l., t.l., same basis lb. .29½- —
Sodium hydride 50% soln in oil, dms. works lb. 1.25 2.50
25% soln in oil, dms. 50 lbs. or less. f.o.b shipping point. lb. 2.20 - —
dms., 50-99 lbs same oasis lb. 1.77 - —
dms., 100-999 lbs., same basis lb. 1.20 - —
Sodium hydride, dms., 1,000 lbs. or more, same basis lb. .95 - —
Sodium hydrosulfide (see Sodium sulfhydrate).
Sodium hydrosulfite dms c.l., frt. alld lb. .23½ —
dms. t.c.l. frt. alld. lb. .25¾- —
Sodium hydroxide, NF, pellets, 100-lb dms., 1 to 100-dm. lots, lb .23½- .26
Sodium hydroxide, tech (see Soda, caustic).
Sodium hypophosphite, NF, dms., 1,000-lb. lots lb. .99 - —
Sodium hyposulfite (see Sodium thiosulfate).
Sodium iodide, USP, 300-lb. dms., f.o.b. works lb. 2.13 - —
Sodium lauryl sulfate, dms., c.l., dlvd lb. .20½- —
dms., t.t.l., dlvd. lb. .21½- —
tanks, dlvd. lb. .19½- —
Sodium lignin sulfonate, bgs., c.l., works 100 lbs. 4.25 - —
t.c.l., bgs., works 100 lbs. 4.75 - 5.25
Sodium metabisulfite (see Sodium bisulfite).
Sodium metaborate, octahydrate, gran. bgs. c.l. works ton.210.00 - —
bgs., ton lots, ex whse 100 lbs. 8.30 - —
bags, smaller lots, ex whse. 100 lbs. 9.61 -11.61
Tetrahydrate, bgs. c.l., works. ton.210.00 - —
Sodium tetrahydrate, bgs., ton lots, ex whse 100 bgs.14.83 - —
bgs., smaller lots, ex whse 100 lbs.16.08 -18.08
Sodium metallic, bricks, c.l., works. lb. .21 —
Fused, 18,000-lb lots or more, works lb. .19½- —
tanks, works lb. .17 - —
Sodium metalinate, bbls., frt. alld. lb. .62 - —
Sodium metaphosphate, bgs., c.l., f.o.b shipping pt 100 lbs.11.10 - —
bgs., t.c.l., same basis 100 lbs.11.85 - —
dms., c.l., same basis 100 lbs.11.70 - —
dms., t.c.l. same basis 100 lbs.12.45 - —
Sodium metasilicate anhyd., bgs., c.l., works 100 lbs. 5.70 - —
bgs., 6,000-19,900 lb. lots, works 100 lbs. 6.05 - —
dms., c.l., works 100 lbs. 6.20 - —
dms., t.c.l., works 100 lbs. 6.55 - —
Pentahydrate, bgs., c.l., works 100 lbs. 4.45 - —
bgs., t.c.l., works 100 lbs. 4.80 6.75
dms., c.l., works 100 lbs. 4.95 —
dms., t.c.l., works 100 lbs. 5.30 7.25
Sodium molybdate, anhyd., dms., works, frt. equald lb. 1.02 - 1.21
Cryst., dms., works, frt. alld lb. .84 - .86
Sodium monoglutamate (see Monosodium glutamate)
Sodium monohydrate (see Sodium carbonate monohydrated)
Sodium naphthionate, bbls. lb. .77 - —
Sodium nitrate, dom., crude, bgs., c.l., works ton.48.00 - —
bulk, c.l., works ton.44.00 - —
Imp., crude, 100-lb. bgs., c.l., Atl., Gulf, Pac., whse. ton.48.00 - —
bulk c.l., same basis ton.44.00 - —
Sodium nitrite, USP, bbls., c.l., works, frt. equald 100 lbs. 9.40 - —
bbls., t.c.l., same basis 100 lbs.11.40 - —
Sodium orthosilicate conc., dms., c.l., works 100 lbs. 6.70 - —
dms., t.c.l., works 100 lbs. 7.05 7.65
Hydrated, flake, bbls., c.l., works. 100 lbs. 5.65 - —
bbls., t.c.l., works 100 lbs. 7.60 - 7.90
Sodium oxalate, 88%, bgs., works. 100 lbs.12.35 - —
99% bgs. works 100 lbs.13.40 - —
Sodium para-aminobenzoate (see Sodium p-aminobenzoate)
Sodium para-aminosalicylate (see Sodium p-aminosalicylate)
Sodium pentachlorophenate, briquets, dms., c.l., works, frt. equald lb. .26 - —
dms., t.c.l., same basis lb. .27½- .34
Pellets, dms., c.l., same basis lb. .26 - —
dms., c.l., same basis lb. .27½- .34
Powd., dms., c.l. same basis lb. .25 - —
dms. t.c.l. same basis lb. .26½- .33
Sodium pentaharbital, USP, dms., 100 lbs or more lb. 6.00 - —
Sodium perborate NF, tech., bgs., c.l., works lb. .137 - —
bgs., t.c.l., works lb. .152 - .215
Sodium peroxide, dms., c.l., t.l., dlvd E. of Miss lb. .21½- —
dms., t.c.l. same basis lb. .22 - .22½
Sodium phenobarbital, USP, 100-lb. dms lb. 3.75 - —
Sodium phenosulfonate, USP, IX, gran., dms lb. .52 .53
NF powd. dms. lb. .55 .56
Sodium phosphate, dibasic, anhyd., bgs., c.l. frt equald 100 lbs. 8.10 - —
bgs., t.c.l., same basis 100 lbs. 8.50 - 9.55

Sodium phosphate, dibasic, cryst., bgs., c.l., t.l., frt. equald. 100 lbs. 4.75 - —
bgs., t.c.l., frt. equald 100 lbs. 5.15 - 5.90
Duohydrate, bgs., c.l., frt. equald. 100 lbs. 7.75 - —
bgs., t.c.l., same basis 100 lbs. 8.25 - —
Monobasic, anhyd bgs., c.l., frt. equald 100 lbs. 9.15 - —
bgs., t.c.l., same basis 100 lbs. 9.55 -10.15
Tribasic, anhyd. bgs. c.l., frt. equald 100 lbs. 9.15 - —
bgs., t.c.l., frt equald 100 lbs. 9.60 -10.20
Sodium phosphate in dms. 60c. to 80c. higher than bgs
Sodium phosphate, USP, dried, powd., bgs., dms., works lb. .19 - .20½
Sodium picramate, tech., paste, dms., f.o.b. works, frt. equald lb. .90 - —
Sodium propionate, any quantity, dms. dlvd E of Rockies. lb. .34½- —
Prices W of Rockies 3c per lb more
Sodium prussiate yellow (see Sodium ferrocyanide)
Sodium pyrophosphate, acid, bgs., c.l., works, frt equald 100 lbs.11.25 - —
bgs., t.c.l., same basis 100 lbs.12.00 -12.50
Sodium pyrophosphate, ferric, dms., c.l., t.l., works lb. .36 - —
dms. t.c.l. works lb. .37 - .39
Tetrabasic, anhyd., bgs., c.l., works, frt equald 100 lbs. 7.38 - —
bgs., t.c.l., same basis 100 lbs. 8.13 - —
bulk, hopper cars, same basis, 100 lbs. 6.83 - —
Sodium salicylate USP dms. 1,000-lbs or more lb. 78½- —
dms., less than 1,000 lbs. dms. lb. 81½- —
Sodium sesquicarbonate, bgs., c.l., works 100 lbs. 2.35 —
t.c.l., dlvd. zone 1 100 lbs. 4.10 - 4.35
dlvd zone 2 100 lbs. 4.35 4.60
dlvd. zone 3 100 lbs. 4.75 4.90
dlvd zone 4 100 lbs. 5.35 5.60
Sales zones are (1) All states E. of Miss., R and N of south bound of Ky. and Va., Ala., La and Miss. south of 31°, Tex E. of 100°; S of 31° Fla.; also Me., N H and Vt in which there are special county zones; Davenport, Ia., and St Louis; (2) Ark E. of 98° Ga.; Iowa (except Davenport) Minn. Mo. (except St Louis) Neb E. of 98° N. C., S C., Tenn and Tex N of 31° and E. of 100° (except Wichita Falls); also Ala. La. and Miss. No of 31°; (3) Ark W of 98° Kan., Neb W. of 98° N D., Okla., S D., Tex. W of 100° (including Wichita Falls excluding El Paso); (4) Ariz. Colo. Idaho. Mont. Nev., N. M., Utah Wyo and El Paso Tex
Sodium sesquisilicate annyd., bgs., c.l., t.l., works 100 lbs 5.70 - —
dms. c.l. t.l., works 100 lbs 6.20 - —
Hydrated, bgs., c.l., works 100 lbs. 5.00 - —
bgs. 6,000-19,900 lb. lots, works 100 lbs 5.35 - —
dms., c.l., works 100 lbs 5.50 - —
dms. 6,000-19,900 lb lots works. 100 lbs 5.85 - —
Sodium silicate, liq., 40° Be. t-3.2, turbid dms. c.l. works 100 lbs 1.65 - —
dms. t.c.l. works 100 lbs 1.90 2.40
tanks, works 100 lbs 1.20 —
47° Be 1:2.9 turbid, dms., c.l., works 100 lbs 2.25 - —
dms., t.c.l. works 100 lbs 2.60 3.45
tanks, works 100 lbs 1.90 —
52° Be 1:2.4 turbid, dms., c.l., works 100 lbs 2.65 —
dms., t.c.l., works 100 lbs 3.00 3.50
tanks, works 100 lbs 2.30 - —
Solid, 1:3.2, bgs. works ton.67.50 - —
Sodium silicofluoride bgs., c.l., works, frt. equald lb. .07 - —
bgs., l.c.l., works, frt. equald. lb. .0775- —
Sodium silicofluoride in dms., 0.4c. per lb. higher.
Sodium stannate dms. works, frt. alld. E lb. .745 - .901
Sodium sulfa drugs (see Sulfa name)
Sodium sulfanilate bbls. works lb. .22 - —
Sodium sulfate NF VII, dried, powd., dms lb. .22½- —
Tech., anhyd. bgs. c.l. dlvd E. ton.56.00 - —
Tech., detergent, rayon grade, bgs., c.l., works ton.38.00 - —
bulk, c.l., works ton.34.00 - —
USP cryst., fib dms lb 17½ .18
Sodium sulfhydrate, flake 70-72%, dms. c.l. works, frt. equald lb. .07¼- —
dms., t.c.l., same basis lb. 08¼- —
Liq. 40-44% tanks works, 100% basis ton.130.00 —
Sodium sulfide, flake, dms., c.l., works, E., frt. equald lb. .06 - —
dms. t.c.l., same basis lb. .07 - —
Fused, bbls., c.l., works, E., frt. equald lb. .05½- —
bbls. t.c.l., same basis lb. 06½- —
Sodium sulfite, anhyd., tech., bgs., c.l., works 100 lbs. 3.50 - —
bgs. t.l. same basis 100 lbs 4.00 - —
Powd., bgs., c.l., works 100 lbs. 7.55 - —
bgs. t.c.l., same basis 100 lbs 7.95 - —
Sodium sulfocyanide, CP (see Sodium thiocyanate).
Sodium tetraborate (see Borax).
Sodium tetrasulfide, liq., 40%, dms., c.l., works frt equald lb. .04½- —
dms., t.c.l same basis lb. .05½- —
Sodium thiocyanate, purified, cryst., 250-lb dms lb. .90 - —
Tech. anhyd., dms., 1 ton lots or more, works lb. .367 - —
dms., less than ton lots, works lb. .387 - —
Sodium thiosulfate NF cryst. bbls. lb. .13½- —
Tech. anhyd. 100-lb bgs. c.l., t.l., frt. equald 100 lbs. 7.75 - —
100-lb. bgs. t.c.l., t.t.l., frt. equald 100 lbs. 8.15 - —
Sodium thiosulfate, photograde, 64-lb. bgs., c.l., t.l., frt. equald. lb. .0775- —
64-lb bgs. t.c.l. t.t.l., frt. equald lb. .0815- —
Tech., pentahydrate, photo grade, 100-lb. bgs., c.l., t.l., frt. equald 100 lbs. 4.95 - —
100-lb. bgs., t.c.l., t.t.l., frt. equald 100 lbs. 5.20 - —
Sodium titanate, etns. c.l., works. lb. .14¼- —
etns. 5-ton lots, works lb. .14½- —
etns., 1-ton lots or less, works lb. .14¾- —
Sodium trichloroacetate, 90%, 100-lb dms., c.l., frt alld. E. lb. .35 - —
50-lb dms., c.l., frt. alld. E lb. .35½- —
10-lb cns., c.l., frt alld E lb. .42 —
Prices on Sodium trichloroacetate W. of the Rockies are 1¾c. per pound higher.
Sodium tripolyphosphate, bgs., c.l., works, frt. equald 100 lbs. 7.73 - —
bgs., t.c.l., same basis 100 lbs. 8.48 - —
bulk, hopper cars, same basis. 100 lbs. 7.18 - —
Sodium tungstate tech. kgs dlvd. E lb. 1.32 - —
Sodium-ammonium phosphate, purif., cryst., dms., works. lb. .52 - —

Sodium-carboxymethyl cellulose (see CMC).
Sodium-cinchophen (see Cinchophen-sodium).

Sodium formaldehyde sulfoxylate, dms., t.l., dlvd	lb.	.22½-	—
dms., l.t.l., same basis	lb.	.23 -	—
Sodium-zirconyl sulfate, fib. dms., 1,000-lb. lots or more works	lb.	.28 -	—
fib. dms., smaller lots, same basis	lb.	.30 -	—
Solvent naphtha, coaltar, high-flash, tanks, frt equald	gal.	.30 -	.35½
Petroleum, straight, aromatic, 310°-360F. b.r., 14°-16°C. m.a.p., tankcars, New Jersey and New York	gal.	.29 -	—
Houston, Texas	gal.	.29 -	—
355°-420°F. b.r., 17°-18°C. m.a.p., tankcars, New Jersey and New York	gal.	.30 -	—
Houston, Texas	gal.	.30 -	—
Partial aromatic, 211°-263°F b.r., 31°C m.a.p., tankcars, New Jersey and New York	gal.	.235 -	—
Solvent naphtha, pet., partial aromatic, 286°-340°F. b.r., 22°C. m.a.p., tankcars, New Jersey and New York	gal.	.275 -	—
319°-380°F. b.r., 27° C. m.a.p., tankcars, New Jersey and New York	gal.	.27 -	—
322°-395°F b.r., 28°C m.a.p., tankcars, New Jersey and New York	gal.	.28 -	—
Sorbitan monostearate fib dms., 20,000-lb. lots, works	lb.	.33½-	—
10,000 to 20,000-lb. lots, works	lb.	.35½-	—
fib. dms., smaller lots, works	lb.	.38½-	.40½
Sorbitan tristearate, fib dms., 20,000-lb. lots works	lb.	.34 -	—
fib dms., 10,000 to 20,000-lb. lots, works	lb.	.36 -	—
fib. dms., smaller lots, works	lb.	.39 -	.41
Sorbitol, USP, reg., 70% aqueous, dms., c.l., works	lb.	.18 -	—
dms., t.c.l., works	lb.	.19 -	—
tanks, works	lb.	.16¼-	—
powd., dms., c.l., works	lb.	.38½-	—
dms., 10,000 to 20,000 lb. lots, works	lb.	.40½-	—
Sorbitol, soln., comi., aqueous, dms., c.l., works	lb.	.26 -	—
dms., t.c.l., works	lb.	.27 -	—
tanks, works	lb.	.23¼-	—
Soya protein, chemically isolated, old process, bgs., c.l., works.	lb.	.23 -	—
bgs., t.c.l., works	lb.	.23¼-	.23½
Chemically isolated, new process, bgs., c.l., works	lb.	.20 -	—
bgs., t.c.l., works	lb.	.20½-	.29½
Soybean meal, 44%, bulk, unrestricted, Decatur	ton	65.00 -	—
Soybean oil, crude, tanks, Decatur,	lb.	.10⅜-	—
Foots, soapstock acid 95%, tanks, New York	lb.	.05¾-	—
Alkali, refd., dms.	lb.	.1495-	.1520
tanks	lb.	.1295-	—
Clarified dms.	lb.	.1445-	.1470
tanks	lb.	.1245-	—
Refd., salad, dms.	lb.	.1490-	.1515
tanks	lb.	.1290-	—
Soybean oil acids, dbl. dist., dms.,	lb.	.17¼-	.18½
tanks	lb.	.14¾-	—
S. D., dms.	lb.	.16 -	.18½
tanks	lb.	.13½-	—
Sparteine sulfate, cns., 100 oz. or more	oz.	.80 -	—
Spearmint leaves, dom., bls	lb.	75 -	—
Spearmint oil, NF, dms	lb.	3.75 -	—
Sperm oil, bleached winter, 45°, dms.	lb.	.1750-	.1850
tanks	lb.	.1550-	—
Nat., winter, 45°, dms.	lb.	.1650-	.1750
tanks	lb.	.1450-	—
Spermaceti wax, blocks, cs.	lb.	.32 -	.33
cakes, cs.	lb.	.33	.34
Spruce oil, cns., dms.	lb.	2.10 -	3.55
Squill, white, bls.	lb.	.16 -	.18
Powd., bbls. bxs.	lb.	.17 -	.20
St. John's bread, edible, bls.	lb.	.17 -	.20
Stannic chloride, anhyd., dms., works	lb.	.916 -	.938
Stannous chloride, anhyd., dms	lb.	1.142 -	1.397
Stannous chloride, hyd., crystal, 800 lbs. or more	lb.	.97 -	—
Stannous oxide, dms., dlvd.	lb.	1.701 -	1.831
Stannous sulfate, works	lb.	1.229 -	1.269
Star root (see Helonias root).			
Stargrass root (see Aletris root.)			
Stavesacre seed, bgs	lb.	.60	.61
Stearic acid, bbl. pressed, bgs.	lb.	.16¾-	.19¼
Single-pressed, bgs.	lb.	.16¼-	.18¾
Triple-pressed, bgs.	lb.	.18½-	.21
Stoddard solvent, petroleum, tanks, east coast, New Jersey, New York	gal.	.18 -	—
tanks, Houston	gal.	.1475-	—
tanks, group 3	gal.	.12375-	—
Stramonium leaves, bgs	lb.	.15 -	.20
Streptomycin sulfate, bulk	gram.	.023 -	.03
Strontium bromide, NF, cryst., gran., 150-lb dm., frt. equald	lb.	1.00 -	—
Strontium carbonate, pure dms., 5-ton lots or more, works	lb.	.35 -	—
dms., 1-ton lots, works	lb.	.37 -	—
Tech., dms., works	lb.	.19 -	—
Strontium chromate fib dms. dlvd.	lb.	.48 -	—
Strontium iodide, jars, 25-lb lots	lb.	3.57 -	—
Strontium nitrate bgs., c.l., works.	100 lbs.	11.00 -	—
bgs., t.c.l., works	100 lbs.	12.00 -	—
Strontium salicylate NF, dms	lb.	1.83 -	—
Strontium sulfate, air floated, 90%, 325 mesh bgs., works.	ton	56.70	66.15
Strophanthin G (see Quabain, USP)			
Strophanthin K bots.	oz.	25.00	25.50
Strophanthus seed, Kombi, biologically tested, bgs	lb.	2.50	3.00
Styrax gum USP cs	lb.	4.50	5.50
Styrene monomer, polymer grade, 99.6%, dms., c.l., dlvd	lb.	.17 -	—
dms. t.c.l., same basis	lb.	.19 -	—
tanks, frt. equald.	lb.	.132 -	—
Tech., 99.2%, dms., c.l., dlvd.	lb.	.15 -	—
dms., t.c.l., same basis	lb.	.17 -	—
tanks, frt. equald	lb.	.1103-	—
Above prices are escalated for each calendar quarter on the basis of cost of benzene in the range of 31c. to 34c a gallon and petroleum refining labor.			
Styralyl acetate, bots	lb.	1.03	1.10
Succinic acid purif., cryst., dms., t.l., frt. alld	lb.	.62 -	—
dms. t.t.l. same basis	lb.	.63 -	.75
Succinic anhydride, dms., c.l., t.l., dlvd	lb.	.51 -	—
dms., t.c.l., same basis	lb.	.52 -	—
Sucrose, refd. white, bgs. refy	lb.	.0915-	—
Sucrose acetate, isobutyrate, 90%, dms. t.l., dlvd	lb.	.33½-	—
dms., t.t.l., same basis	lb.	.35 -	—
tanks, same basis	lb.	.31 -	—
100%, t.l., dms., dlvd.	lb.	.35½-	—
t.t.l., dms. same basis	lb.	.37 -	—
Sucrose octa-acetate, denaturing grade 100-200-lb. lots, bgs., t.c.l., works	lb.	1.00 -	—

Sugar (see Sucrose).

Sugar cane, wax, dom., refd., slabs, 80-lb. ctns., works	lb.	.60 -	.65
80-lb. ctns., spot	lb.	.65 -	.75
Sulfabenzamide, dms.	kilo.	8.80 -	9.90
Sulfabenzamide-sodium, dms.	kilo.	9.00 -	10.10
Sulfacetamide, USP, fib dms	kilo.	6.61 -	6.83
Sulfacetamide-sodium, USP, fib. dms	kilo.	8.15 -	9.25
Sulfadiazine, USP, microcrystals, dms	kilo.	23.35 -	24.45
USP, powd., dms.	kilo.	22.60 -	23.70
Sulfadiazine-sodium, USP, dms	kilo.	24.80 -	25.90
Sulfaguanidine, NF X, dms	kilo.	5.50 -	6.60
Sulfamerazine, USP, microcrystals, dms	kilo.	23.50 -	—
Sulfamerazine-sodium, USP, powd., dms	kilo.	24.80 -	25.90
Sulfamethazine, USP XV, microcrystals, dms	kilo.	19.65 -	20.75
USP XV, powd. dms	kilo.	18.75 -	19.85
Sulfamic acid, cryst. dms., c.l., t.l., works	100 lbs.	16.00 -	—
dms., t.c.l., t.t.l., works	100 lbs.	17.50 -	18.50
Gran., dms., c.l., t.l., works	100 lbs.	14.75 -	—
dms., t.c.l. t.t.l. works	100 lbs.	16.25 -	17.25
Sulfanilamide NF reg. 1,000 lb., fib. dms., frt. equald	lb.	1.75 -	—
NF, reg., smaller lots, fib. dms., frt. equald	lb.	1.80 -	—
Sulfanilamide quinoxaline, veterinary dms	kilo.	16.28 -	—
Sulfanilic acid, tech. dms. c.l., frt. alld	lb.	.21 -	—
dms., t.c.l., frt. alld	lb.	.23 -	—
Sulfapyridine, USP XV, powd., bots., tins	kilo.	15.45 -	16.55
Sulfapyridine-sodium, monohydrate, dms	kilo.	16.55 -	17.65
Sulfathiazole, NF X, microcrystals, dms	kilo.	6.25 -	6.90
NF X, powd., dms.	kilo.	5.50 -	6.15
Sulfathiazole-sodium, NF X, dms., 1,000-lb. lots or more	lb.	2.35 -	—
Sulfur, comi. flour, bgs., mines.	100 lbs.	2.35 -	—
bbls., mines	100 lbs.	3.30 -	—
lump, bgs., mines	100 lbs.	2.25 -	—
bbls., mines	100 lbs.	2.80 -	—
Sulfur, crude, dom. bright, bulk, f.o.b cars, mines	long-ton.	23.50 -	—
export, f.o.b vessels, Gulf ports.	long-ton.	25.00 -	—
US and Canada, f.o.b vessels Gulf ports	long-ton.	25.00 -	—
Domestic dark sulfur prices are $1 per long-ton lower			
Sulfur, crude, imp. Mexican, bulk, filtered, f.o.b., vessel, Coatzacoalcos	long-ton.	24.00 -	—
Mexican dark sulfur price is $1 per long-ton lower.			
Sulfur, refd., flowers, NF, bgs., mines	100 lbs.	5.65 -	—
bbls., mines	100 lbs.	7.00 -	—
flour, light, bgs., mines	100 lbs.	5.25 -	—
bbls., mines	100 lbs.	6.25 -	—
lump, bgs., mines	100 lbs.	4.95 -	—
rolls, bgs., mines	100 lbs.	5.50 -	—
bbls., mines	100 lbs.	6.25 -	—
salt block, bgs., mines	100 lbs.	4.65 -	—
virgin block, bbls. mines	100 lbs.	4.70 -	—
Sulfur, rubbermakers, comi., reg., bgs., mines	100 lbs.	2.45 -	—
bbls. mines	100 lbs.	3.70 -	—
98-100%, pashing through mesh, bgs., mines	100 lbs.	2.55 -	—
bbls., mines	100 lbs.	3.80 -	—
Sulfur, refd., bgs., mines	100 lbs.	4.90 -	—
bbls., mines	100 lbs.	6.05 -	—
treated, 2.5% mineral oil, bgs., mines	100 lbs.	2.75 -	—
bbls., mines	100 lbs.	4.00 -	—
Sulfur dichloride, ret. dms., c.l., works, frt. equald	lb.	.05½-	—
ret. dms., t.c.l., same basis	lb.	.06¾-	—
tanks, same basis	lb.	.04½-	—
Sulfur dioxide, liq. comi., cyls., works, frt. equald	lb.	.10 -	.13
multi-unit cars, works	lb.	.0535-	—
tanks, works	lb.	.045	—
refrigeration, cyls., dlvd	lb.	.33 -	—
Sulfur monochloride 55-gal non-ret. dms., c.l., frt. equald	lb.	.05½-	—
dms., t.c.l., same basis	lb.	.06¾-	—
tanks, same basis	lb.	.04½-	—
Sulfuric acid 60° Be, cbys., c.l., works	100 lbs.	2.00 -	—
cbys., t.c.l., works	100 lbs.	2.30 -	—
tanks, works	ton	18.60 -	—
66° Be, cbys., c.l., works	100 lbs.	2.25 -	—
cbys., t.c.l., works	100 lbs.	2.55	3.35
tanks, works	ton	22.35	—
98%, tanks, works, East	ton.	23.50 -	—
99%, tanks, works, East	ton.	23.70 -	—
100%, tanks, works, East	ton.	23.95 -	—
Sulfuric acid, California works, tanks	ton.	26.45 -	—
CP NF consumers cbys., c.l., frt. equald	lb.	.12¾-	—
consumers' cbys., t.c.l., same basis	lb.	.14¼-	.14¾

"It's here my friends, new improved Varsol... the solvent with long-lasting freshness. Produced by a unique, new Esso hydrofining process, today's Varsol retains its efficient solvency, yet keeps its fresh, sweet smell locked in... even after long storage or many processings in your plant. Like all Esso solvents, new improved Varsol reaches your plant fresh, uniform, and on schedule from modern, conveniently located storage facilities. Don't hesitate to call on your local Esso Representative for further information and expert technical assistance. Or write: 15 West 51st Street, New York 19, New York. (And tell 'em Nosey sent you!)" *Nosey*

HUMBLE OIL & REFINING COMPANY Esso

Sulfuric Acid—Toluene

Sulfuric acid, CP, NF, 5-pt. bots., extra, cs., c.l., works, frt. alld. lb. .16¼- —
5-pt bots, extra cs. l.c.l. same basis lb. 17¾- .18¾
Sulfuric acid fuming (oleum), 20% tanks works ton 25.00 - —
40% tanks, works ton 29.00 - —
65% tanks works ton 39.50 - —
Superphosphate run-of-pile under 22% a.p.a. pulv., bulk, c.l., Baltimore unit-ton. .90 - .93
bulk, c.l. Carteret, N. J. unit-ton. .90 - .93
Superphosphate triple 48% or more a.p.a., pulv. bulk c.l. East Tampa, Fla unit-ton 1.00 - —
bulk f.o.b. vessel at Fla unit ton 1.05 - —
Sweet birch oil, USP northern, cns lb 4.00 9.50
USP southern cns lb 2.00 3.05

T

2,4,5-T dms c.l. works frt. equald. lb 1.18 - —
dms. l.c.l., same basis lb 1.25 - —
2,4,5-T, isopropyl ester, dms., c.l., works, frt equald lb. 1.24 - —
dms., l.c.l. works lb 1.29 - —
Talc, dom., fibrous, grd., bgs., c.l., works, New York ton 28.00 —
bgs., l.c.l., works ton 31.00 -36.00
Talc, dom., 99.5%, 325 mesh, bgs., c.l., works, New York ton 31.00 - —
bgs., l.c.l., works ton 34.00 - —
99.95X, 400 mesh, micronized, bgs., c.l. works ton 38.00 - —
625 mesh, micronized, bgs., c.l. works ton 80.00 - —
Dom., ord., Calif., grd., bgs., c.l., works ton 34.00 -39.50
Vermont, off-color, grd., bgs., c.l., works ton 19.40 - —
bgs., l.c.l., works ton 37.00 - —
Imp., Canadian, grd., bgs., c.l., mines ton 20.00 35.00
tanks, works lb. .02⅞- .03⅛
Tall oil, crude, tanks, works lb. .03¼- 03½
Acid, refined dms., c.l., works lb. .08¾- .10
tanks, works lb. .07½- .08¼
Dist., depending on grade, dms., c.l., works lb. .08¾- .09¼
tanks, works lb. .07½- .08½
Tall oil fatty acids, less 2% rosin acid, dms., c.l., works lb. .09¾- .11
tanks, works lb. .07¾- .09
2-6% rosin acid, dms., c.l., works, lb. .08½- .09
tanks, works lb. .06½- 07
Tallow, edible, tanks, dlvd lb. .08¾- —
Inedible, fancy bleachable, tanks, lb. .05½- —
fancy, guarant'd, bulk, f.o.b. steamer lb. .06⅛- —
dms., f.a.s. lb. .07⅛- —
tanks, dlvd. lb. .05⅞- —
No. 1, dlvd. lb. .05 - —
Prime, tanks, dlvd. lb. .05⅝- —
Tallow, inedible, special, tanks, dlvd. lb. .05¼- —
Sulfonated, 25%, bbls., l.c.l. lb. .08½- .09¾
50%, bbls., l.c.l. lb. .10½- .11
Tallow acids, dist., dms. lb. .13¼- .15¾
tanks lb. .10¾- —
Hydrogenated, dms. lb. .15½- .18
Tallow oil, acidless, dms., c.l. lb. .14 - —
dms., l.c.l. lb. .16 - —
tanks lb. .12½- —
Tangerine oil, Florida, dms. lb. 4.25 - —
Tankage, animal, feeding, 9-11% ammonia, New York bulk, unit-ton. 4.75 - 5.00
Tannic acid, NF, fluffy, bbls., 1,000-lb lots lb. 2.05 —
bbls., smaller lots lb. 2.06 2.07
powd., bbls., 1,000-lb. lots lb. 1.95 - —
bbls., smaller lots lb. 1.96 1.99
Tech., dms lb. 1.05 —
Tansy oil, dms lb. 6.60 8.00
Tar acid oil, 15-18%, dms., c.l., dms., l.c.l., same basis gal. .55½- —
tanks, same basis gal. .43½- —
25-28%, dms., c.l., frt. equald basis gal. .53½- —
dms., l.c.l., same basis gal. .62 - —
tanks, same basis gal. .50 - —
50-53%, dms., c.l., same basis gal. .75 - —
dms., l.c.l., same basis gal. .77 - —
tanks, same basis gal. .65 - —
Tar, coal (see Coaltar)
Tartar emetic (see Antimony potassium tartrate).
Tartaric acid, NF, 100-lb bgs., c.l., frt equald lb. .41 —
bgs., 10,000 lbs. 1 shipt, same basis lb. .43 - —
bgs., smaller lots, same basis lb. .47 - —
Terpine hydrate, NF, cryst., powd., 100-lb fib dms lb. .70 - —
Terpineol, extra, dms lb. .50 .60
Prime, dms. lb. .40 .50
Terpinyl acetate, extra, cns., dms. lb. .64 .75
Prime, dms. lb. .53 .56
Terpinyl propionate, dms. lb. 1.65 - 1.70
Testosterone, USP, bots. gram. No prices.
Testosterone propionate, USP, bots. gram. No prices.
Tetrachloroethane, dms., works lb. .14½- —
Tetrasodium pyrophosphate (see Sodium pyrophosphate).
Tetrachlornethylene, tech. (see Perchloroethylene).
Tetrachloroethylene, USP, 55-gal. dms., c.l., t.l., works lb. .20½- —
dms., l.c.l., works lb. .22 - .23¼
Tetraethyl orthosilicate dms., c.l., dlvd. E lb. .65 - —
dms., l.c.l., dlvd. E lb. .66½- —
Tetraethyl pyrophosphate, 40%, cns., dms., frt. equald lb. .75 —
Tetraethylenepentamine dms., c.l., dlvd. E lb. .53½- —
dms., l.c.l., dlvd. E lb. .55 - —
tanks, dlvd. E lb. .51 - —
Tetraethylthiuram disulfide, tech., dms., frt alld lb. 1.04 - —
Tetrahydrofuran, dms. c.l., t.l., works lb. .36½- —
dms., l.c.l., or l.t.l., works lb. .37 - —
tanks, works lb. .35 —
Tetrahydrofurfuryl alcohol, dms., c.l. t.l. Memphis, Tenn. lb. .25½- —
dms., l.c.l., Memphis, Tenn. lb. .26½- —
dms., c.l., t.l., Newark, N.J. lb. .27½- —
Tetrahydrofurfuryl alcohol, dms., l.c.l., Newark, N.J. lb. .28½- —
tanks, dlvd. E. of Denver lb. .25 - —
tanks, dlvd. W. of Denver lb. .26 - —
Tetrahydrophthalic anhydride dms., c.l. t.l. frt alld E lb. .39 - —
l.c.l., t.l.l. same basis lb. .41 - —
Tetrapotassium phosphate (see potassium phosphate)
Thallium metal, dlvd lb. 7.50 -10.00
Thallium sulfate, 99% bots. dlvd. lb 5.00 -10.00
Theobromine, NF fib dms. 100 lbs. f.o.b., works lb. 4.10 4.15
Theobromine and sodium acetate, USP, fib dms. 500-lbs. works lb. 6.45 - —
Theobromine, sodio-salicylate, NF, fib dms. 500-lbs. works, lb 3.80 - —
Theophyline, USP, annyd. 100-lb dms., frt alld lb 3.65 - —
Thiamine hydrochloride, USP fib dms., frt. alld kilo. 27.00 - —
Thiamine mononitrate, USP, fib dms., frt. alld kilo. 27.00 - —
Thiocarbanilide, dms., ton lots lb 74 - —
dms., less ton lots lb 76 - —
Thiodiphenylamine (see Phenothiazine).
Thioflavin green toner, brilliant, molybdated, PMA, kgs. works lb. 5.20 - —
Tungstated, PTMA, kgs., works lb. 6.20 - —
Thioglycolic acid, refd., 55 gal. dms., ton lots, 100% basis lb 1.15 - —
Thiosalicylic acid, 80% dms., 1,000-lb., lots, works lb 4.00 - —
Thiourea, tech., bgs., t.l., dlvd. Metropolitan area lb. .28½- —
bgs., ton lots, same basis lb. .31½- —
bgs., less than ton lots, same basis lb. .32½- —
Thorium nitrate, purif., fib dms., 100-lb lots or more works lb 3.50 —
dl-Threonine, dms. 25 kilos, works, kilo. 115.00 - —
Thyme leaves, French, tripie sifted extra, bgs lb. 25 - —
Spanish, extra, bgs lb. .14 - —
reg., bgs. lb. .08 - —
Thyme oil, NF, red, cns., dms. lb. 3.25 - 3.60
NF, white, cns lb. 3.50 - 3.95
Tech., white, cns lb. .80 - 1.10
Thymol, fib dms., 25-lbs., f.o.b. works lb 2.45 —
Thymol iodide, NF, dms. 100-lbs. f.o.b. works lb 7.30 —
Timbo root (see Cube root)
Tin chloride (see Stannous chloride, anhyd.)
Tin crystals (see Stannous chloride, hydrous)
Tin metal (Straits) lb. 1.24 - —
Tin oxide (see Stannic oxide)
Tin sulfate (see Stannous sulfate).
Tin tetrachloride, anhyd. (see Stannic chloride, anhyd.)
Titanium dioxide, anatase, all grades, bgs., 30-ton c.l. min. frt. alld. lb. .25 - —
20-ton c.l. min. frt. alld. lb. .25½- —
bgs., l.c.l., same basis lb. .26 - .26¼
Titanium dioxide, rutile, all grades, bgs., 30-ton c.l. min. frt. alld. .27 - —
20-ton c.l., min. frt. alld. lb. .27½- —
bgs., l.c.l., same basis lb. .28 - .28¼
metallurgical, nat., bgs., c.l., f.o.b. Jacksonville, Fla ton. 180.00 - —
bgs., 5-ton lots, Niagara Falls, N.Y. ton. 205.00 - —
bgs., ton lots, same basis ton. 215.00 - —
Milled metallurgical titanium dioxide $7.50 per ton higher
Titanium dioxide-calcium pigment, 30% Ti O_2, reg. bgs., 30-ton c.l., f.o.b lb. .09½- —
20-ton c.l., works lb. .09⅝- —
bgs., l.c.l., works lb. .09⅞- —
50% Ti O_2, high-tinting, dms., 30-ton c.l lb. .14½- —
20-ton c.l., works lb. .14⅝- —
dms. l.c.l lb. .14⅞- —
Titanium hydride, powd., dms., works lb. 8.10 9.00
Titanium tetrachloride, tech. dms., c.l. works lb. 26 —
dms., l.c.l., works lb. .27½- .29
tanks, works lb. .20 —
Tobias acid, dms., c.l., t.l., 20,000 min., f.o.b. plant, frt. alld E lb. .81 - —
dms., l.c.l., l.t.l., 5,000-lbs.-19,999 lbs., same basis lb .81½- —
dms., l.c.l., l.t.l., less than 5,000 lbs., same basis lb. .84 - —
For west coast delivery add 2c. per lb.
d-a-Tocopherols, NF, mixed conc. pure basis bots kilo. 67.00 - —
d-a-Tocopheryl acetate, NF, conc. pure basis bots kilo. 122.00 - —
d-a-Tocopheryl acid succinate, cryst. bots kilo 109.00 —
dl-a-Tocopherol, bots kilo 99.00 —
dl-a-Tocopheryl acetate, bots kilo 90.00 —
25% dry. powd., bots kilo 22.50 -24.00
33⅓% dry. powd. bots. kilo 30.00 31.50
o-Tolidine base, dry, kgs., 100% basis lb 1.55 —
Paste, kgs. 100% basis lb 1.50 —

TOLUOL
Toluol quotations, both coaltar and petroleum, may be found under Toluene.

Tolu balsam, cns. lb. 4.00 - 4.50
Toluene, coaltar, indust., or nitration, tanks, dlvd. E. of Rockies gal. 25½- —
Petroleum, indust., tanks, dlvd. gal. 25½- —
Toluene prices, coaltar or petroleum source, East Coast Metropolitan areas only, tankcars, 25c. per gallon dlvd.

There's a **TITANOX®**
white pigment for every paint requirement

TYPE OF PIGMENT		PRINCIPAL USES
RUTILE "pure" TITANIUM DIOXIDE PIGMENTS		
TITANOX-RA	General purpose; whiteness retentive, semi-chalking; low oil absorption.	White and tinted industrial product finishes of all types mainly for indoor use (air dry and bake); trade sales enamels.
TITANOX-RA-50	Multi-purpose; highly chalking resistant; whiteness retentive.	Water emulsion paints of all types, interior-exterior enamels, exterior white and tinted finishes, multi-purpose industrial product finishes for indoor and outdoor use (white and tinted air dry and bake).
TITANOX-RA-NC	"Non-chalking"; whiteness retentive.	Alltypes of exterior coatings—especially tinted enamels, lacquers and paints for outdoor use.
TITANOX-RA-10	Unmodified for special effects; high TiO_2 content.	Certain specialized coatings such as some silicone compositions.
ANATASE "pure" TITANIUM DIOXIDE PIGMENTS		
TITANOX-A-MO TITANOX-A-LO	General purpose; chalking type; presents properties of anatase titanium dioxide not modified for special effects. (MO- medium oil absorption; LO- low oil absorption.)	White exterior house paints (often along with a proportion of rutile pigment such as TITANOX-RA-50). All coatings in which properties of anatase TiO_2 are needed.
TITANOX-A-168-MO TITANOX-A-168-LO	Whiteness retentive. (MO- medium oil absorption; LO- low oil absorption.)	White exterior house paints (often along with a proportion of rutile pigment such as TITANOX-RA-50).
TITANOX-AA	Whiteness retentive; semi-chalking.	Some white exterior house paints in which anatase is preferred to rutile; largely replaced by TITANOX-RA.
TITANIUM (RUTILE)-CALCIUM PIGMENT (Approx. 50% TiO_2, 50% $CaSO_4$)		
TITANOX-C-50	High hiding intermediate between rutile "pure" TiO_2 and 30% TiO_2 rutile-calcium pigment.	Semi-gloss and satiny finishes, flat wall paints—especially alkyd flats requiring lowered prime pigment volume, enamel undercoaters, trade sales enamels, general utility paints.
TITANIUM (RUTILE)-CALCIUM PIGMENTS (Approx. 30% TiO_2, 70% $CaSO_4$)		
TITANOX-RCHT	General purpose.	Interior architectural and trade sales paints—flats, semi-gloss and gloss paints, painters' enamels, wall primers, enamel undercoaters; usually along with TITANOX-A in exterior house paints; traffic paints.
TITANOX-RCHT-X	General purpose, maximum ease of dispersion.	Similar to TITANOX-RCHT.
TITANOX-RC	"Non-chalking"; exterior tinted paint grade.	Exterior tinted coatings which require extended titanium dioxide pigment, such as house paint tint bases, floor, porch and deck enamels, trim paints, etc.; exterior house paint primers.

In addition, TITANOX-A-WD anatase TiO_2 has been used in early types of water paints of the calsomine type. Other TITANOX white pigments, not designed primarily for use in paints, may be of interest to the paint researcher, such as TITANOX-RA-40 a rutile titanium dioxide that yields the color of anatase plus high opacity in certain compositions and TITANOX-A-CG an anatase titanium dioxide remarkably free from coarse agglomerates in some aqueous systems. To help solve special problems in which titanium pigments are the governing factor, we are willing to offer highly specialized products.

8172-B

TITANIUM PIGMENT CORPORATION
SUBSIDIARY OF NATIONAL LEAD COMPANY
111 Broadway • New York 6, N. Y.
In Canada: Canadian Titanium Pigments, Ltd., Montreal

p-Toluenesulfonamide, powd., dms., t.l., works lb. .60 - —
dms., l.t.l., same basis lb. .63 - —
Toluenesulfonic acid, 55-gal. dms., t.l., frt. alld lb. .16 - —
1,000-lb. or more, same basis lb. .18 - —
less than 1,000-lb., same basis lb. .23 - —
tanks, same basis lb. .14 - —
Toluenesulfonic acid in 10-gal. dms., 2c. per lb. more.
p-Toluenesulfonic acid monohydrate, dms., c.l., or t.l lb. .90 - —
dms., 125 lbs. to t.l. lb. 1.00 - —
m-Toluidine, dms., c.l., works, frt. alld lb. .83 - —
dms., l.c.l., same basis lb. .84 - —
tanks, same basis lb. .82 - —
o-Toluidine, dms., c.l., works, frt. alld lb. .27 - —
dms., l.c.l., same basis lb. .28 - —
tanks, same basis lb. .26 - —
p-Toluidine, tech., flake, dms., frt. alld lb. .50 - —
Cast, dms., frt. alld. lb. .45 - —
p-Toluidine-m-sulfonic acid, dms., works lb. .92 1.04
Toluidine red toner, deep shades, kgs., works lb. 1.70 - —
Light shades, kgs. works lb. 1.70 - —
2,4-Tolylenediamine, cryst., fib. dms., l.c.l., frt. alld lb. 1.10 - —
Tonka beans, Angostura, prime f.o.b., N.Y. lb. 1.35 - 1.50
Brazilian, Surinam, cs., same basis lb. 1.00 - 1.10
Totaquine, 100-oz. lots, cns. oz. .42 —
Toxaphene, dms., c.l., t.l., works. lb. .22 - —
dms., l.c.l., l.t.l., works lb. .28 —
Tragacanth gum, No. 1, ribbons, cs lb 4.10 4.20
No. 2, cs. lb. 3.75 3.80
No. 3, cs. lb. 3.40 3.65
USP powd., bbls. lb 1.05 1.15
Triacetin, dms., c.l., dlvd. E. of Rockies lb. .38 - —
dms., l.c.l., same basis lb. .39½- —
tanks, same basis lb. .35½- —
Triallylamine, dms., c.l., dlvd lb. .985 - —
dms., l.c.l., dlvd. lb. .995 - —
tanks, dlvd lb. .96 - —
Tributyl citrate, tech., non-ret. dms., c.l., frt alld E of Denver. lb. .42½- —
non-ret. dms., l.c.l., frt. alld. E. of Denver lb. .43½- —
tanks, frt. alld E of Denver lb. .40 - —
Tributyl phosphate, dms., c.l. works. lb. .52½- —
dms. l.c.l. same basis lb. .53½- —
tanks, same basis lb. .50 - —
Tributylamine dms., c.l., works lb. .67½- —
dms., l.c.l., same basis lb. .69 - —
tanks, same basis lb. .65 - —
Tributyrin dms l.c.l. dlvd. lb. .69 - —
Trichloroacetic acid, tech., 300-lb. dms. c.l., f.o.b works lb. .52 - —
USP, 100-lb dms., frt. equald lb. 1.25 - —
Trichlorobenzene dms. c.l. frt alld. E. lb. .15 - —
dms., l.c.l. frt. alld. E. lb. .16 - —
tanks, frt. alld E. lb 13¼- —
Trichlorobenzene prices in the West 1¾c. higher
1,1,1-Trichloroethane, dms., c.l., dlvd. lb. .13¼- —
dms., l.c.l., dlvd lb. .16 - —
tanks, dlvd lb. .12¼- —
1,1,2 Trichloroethane, dms., c.l., works lb. .15½- —
dms., l.c.l., works lb. .16¼- —
tanks, works lb. .13½- —
Trichloroethylene dms. c.l., or t.l., dlvd lb. .13½- —
dms., l.c.l., dlvd. lb. .14¾- .15¼
tanks, dlvd. lb. .12 - —
Trichloroisocyanuric acid dms., c.l., t.l., frt equald lb. .65 - —
dms. l.c.l. same basis lb .75 - —
Trichlorophenoxyacetic acid (see 2,4,5-T).
Tricholine citrate, 65% soln., non-ret. dms., 1 dm. frt. equald kilo. 3.10 - —
Tricresyl phosphate, coaltar, dms., c.l., dlvd lb. .35 - —
dms., l.c.l., dlvd. lb. .36 - —
tanks dlvd lb. .32½- —
Petroleum, dms., c.l., dlvd lb. .35 - —
dms., l.c.l. dlvd lb. .36 - —
tanks dlvd lb. .32½- —
Tridecyl alcohol, mixed isomers, dms., c.l., dlvd. E lb. .22½- —
dms., l.c.l., dlvd. E lb. .24 - —
tanks, dlvd. E lb. .20 - —
Triethanolamine, dms., c.l., dlvd. E. lb. .24½- —
dms., l.c.l., same basis lb. .26 - —
tanks, same basis lb .22 - —
Triethanolamine tauryl sulfate, dms., c.l., t.l., frt. alld lb. .25½- —
dms. t.l., frt alld. lb. .26½- —
tanks, frt alld lb. .24½- —
Triethylamine dms. c.l., dlvd E. lb. .50 - —
dms., l.c.l., same basis lb. .51½- —
tanks, same basis lb. .47½- —
Triethyl citrate, refd., tech., non-ret dms. c.l., frt. alld E. of Denver lb. .46¼- —
non-ret. dms., l.c.l., frt. allid. E. of Denver lb. .47¼- —
tanks frt allid E of Denver. lb. .43¾- —
Triethyl phosphate, dms. c.l. dlvd. lb. .40½- —
dms. l.c.l., dlvd. lb. .42 - —
tanks, dlvd lb. .38 - —
Triethylene glycol, dms., c.l. dlvd. E lb. .21 - —
dms., l.c.l., dlvd. E lb. .22½- —
tanks, dlvd. E lb. .18½- —
IIP, tanks, dlvd. E lb. .20 - —
Triethylenetetramine dms., c.l., dlvd. E lb. .48½- .48¾
dms., l.c.l., same basis lb. .50 - .50¼
tanks, same basis lb. .46 - —
Triisobutylene tanks, dlvd lb. .08 —
Triisopropanolamine, dms., c.l., dlvd. E lb. .23¼- —
dms. l.c.l., dlvd E lb. .24¾- —
tanks, dlvd E lb. .20¾- —
Trimethylamine anhyd., cyls., l.c.l., frt. equald, 100% basis lb. .30 - .305
tanks frt equald 100% basis. lb. .26 - —
25-40% soln., dms., c.l., frt. equald, 100% basis lb. .35½- —
dms. l.c.l. frt. equald. 100% basis lb. .35½- —
tanks 100% basis, frt. equald lb. .26 - —
Trimethylolpropane dms., c.l., t.l., dlvd. E lb. .30½- —
dms., l.c.l., l.t.l., same basis lb. .31½- —
Trioxanes, pure, dms. c.l., t.l., works lb. .50 - —
dms. l.c.l. works lb. 51½- —
Tripentaerythritol ugs., c.l., t.l., dlvd E lb. .34 - —
bgs. l.c.l., l.t.l., dlvd E lb. .35 - —
Triphenyl phosphate bbls. c.l., frt. equald lb. 41½- —
bbls l.c.l. frt equald lb. 43½- —
Triphenylguanidine bbls. works lb. .90 - —
Tripropylene dms. c.l. dlvd E gal. 44 - —
dms. l.c.l. same basis gal. .54 - —
tanks, same basis gal. .38 - —

Tripropylene glycol, dms., c.l., t.l., frt alld E lb. .20½- —
dms., l.c.l. l.t.l. frt. alld. E lb. .22 - —
tankcars and compartmented tankcars, frt alld. E lb. .17½- —
tankwagon and compartmented, tankwagon, 1,000 gals., min. frt. alld. E lb. .18 - —
Tripropylene glycol prices 1c. per lb. higher in west.
Trisodium phosphate (see Sodium phosphate tribasic).
dl-Trypophane, dms., 1 kilo, works. kilo. 154.00 - —
Tung oil, dms., New York lb. .31½- .32
tanks, imported lb. .29½- —
tanks, domestic mills lb. .29 Nom.
Tungsten metal powd. 2.0-2.5 microns, dms., works lb. 4.25 - —
Tungstic acid tech. dms., 1,000-lb. lots, works lb. 2.25 - —
dms., smaller lots, works lb. 2.45 - —
Turkey red, bbls. works lb. .62 —
Turpentine, gum (see Protective Coatings market Naval Stores).
Turpentine oil, Ne. cns., dms lb. .28 .50
Tuscan red bbls frt equald lb. .26 .32
Tyrothricin, USP, 1 to 5 kilos gram .50 - —

U

Ultramarine blue, cobalt type, dry or pulp, 250-lb bbls., dlvd. E. of Rockies lb. .33½- .38
Jobbing types, dry, bbls., same basis lb. .18 - .19
Regular types, dry bbls. same basis lb. .25 - .40½
Ultramarine blue prices 1c higher W. of Rockies.

Umber pigment, burnt, American, bgs., c.l., works lb. .07½- .07¾
bgs., l.c.l. works lb. .07¾- .08
turkey-type, bgs., c.l., Boston, Bethlehem, Easton, Pa., Hiwassee, Va., N.Y. lb. .08¼- —
Umber, raw, Amer., bgs., works lb. .07¾- .08¼
Turkey-type bgs. works lb. 08½- .08¾
Undecylenic acid 55-gal dms., f.o.b. works lb. 1.28 - —
Unicorn root, false (see Helonias root).
Unicorn root, true (see Aletris root).
Urea 46% N indust. bgs., c.l., t.l., f.o.b. plant ton. 100.00 - —
Urea, feed grade, c.l., t.l., f.o.b. plant ton. 95.00 - —
45% N, agricultural, bgs., c.l. f.o.b. plant ton. 91.25 - —
Bulk, c.l., t.l., same basis ton. 85.25 - —
Urea-ammonia liquor A, B, C & F grades, N basis, tanks frt equald ton. 120.00 - —
37 grade, tanks, same basis ton. 145.00 - —
Urethane, USP dms. t.l., f.o.b., works lb .65 - —
dms. l.t.l., same basis lb. 70 - —
Uva-Ursi leaves, bls. lb. .14 - .15

V

Valerian root, Belgian bgs. lb. .32 - —
Indian, bgs lb .25 - —
dl-Valine, dms., 1 kilo, works kilo. 37.00 - —
Vanadium pentoxide, tech. dms. works lb 1.38 —
Vandyke brown, bbls. works lb 09½ 12
Vanilla beans, Bourbon, tins lb. 6.40 - 6.65
Mexican cuts, tins lb. 7.50 - 7.30
whole, tins lb. 7.80 - 8.10
Vanillin ex lignin 100-lb fib dms. 2,000-lb lots or more lb 3.00 —
less than 2,000 lbs lb 3.20 3.30
Venetian red jobbing, bgs. works lb .0475- —
Venetian red 20%, bgs. works lb .0525- —
25%, bgs., works lb .0575- —
30%, bgs., works lb 06 —
35%, bgs., works lb .0625- —
40%, bgs. works lb .0675 —
Vetiver oil, Bourbon, cns lb 17.00 17.25
Haitian, cns. lb. 10.00 -12.00
Victoria blue toner, molybdated, PMA 250-lb bbls., dlvd. E of Rockies lb 4.50 4.95
Tungstated, PTMA, 250-lb bbls., dlvd. E of Rockies lb 5.55 —
Victoria blue toner, bbls. prices 1c higher W of Rockies
Vinyl acetate monomer, zone 1, 55-gal dms., c.l., dlvd lb. .1810- —
55-gal dms. l.c.l. dlvd lb. .1960 —
tanks, dlvd. lb. .1560- —
tanktrucks less than 4,000 gal., dlvd lb. .1610- —
Vinyl n-butyl ether, tech. dms., l.c.l., works lb .50 —

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Vinyl chloride monomer, tanks, works, min frt equald E. lb. .08 • —
Vinyl ether, USP, anesthesia, bots., 50cc., hospitals bot 1.12 • —
bots., 75cc. hospitals bot 1.56 • —
Vinyl ethyl ether tech. dms., c.l., works lb. .30¼- —
dms., t.c.l., works lb. .31 - —
tanks, works lb. .28¼- —
Vinyl propionate monomer, dms., c.l., dlvd lb. .49 - —
dms. t.c.l., same basis lb 50 • —
tanks, same basis lb. 47 • —
Vinyl trichloride (see Trichloroethane).
2-Vinylpyridine, 10 dms to tanks, works lb 1.20 • —
1 to 9 dms., works lb 1.35 • —
tanks, works lb. 1.15 • —
Vinyltoluene, dms., c.l., f.o.b., dest. frt. paid, Zone 1 lb. .16½- —
dms., t.c.l., same basis lb. .18½- —
tanks, same basis lb. .14 • —
Zone 2 prices are 1c. per lb. higher. Zone 1 is East of Rockies. Zone 2 is West of Rockies.
Viosterol in nat. vegetable oil, 1,000,000 D units per gram bots., lots of 10 billion USP units 1,000,000 units .02½- —
Virginia type red, bbls., works lb 1.40 - —

Vitamin A acetate, dry, 500,000 units per gram, kilo lots kilo.47.50 • —
325,000 units per gram, same basis kilo.30.88 • —
250,000 units per gram, same basis kilo.23.75 • —
Dry vitamin A acetate in less than kilo lots, $1.25 to $2.50 per kilo higher
Vitamin A, liq. in oil, 1,000,000 A units per gram 1,000,000 units. .07 • —
Vitamin A palmitate, liq., 1,000,000-1,800,000 A units per gram 1,000,000 units. .07 • —
Vitamin B_1 (see Thiamine hydrochloride).
Vitamin B_2 (see Riboflavin and Yeast).
Vitamin B_{12}, cryst., USP (cyanocobalamin), 1-50 grams vials, tins gram.45.00 • —
Vitamin B_{12}, 0.1% vitamin B_{12}, USP, adsorbed on resin, 100 and 500-gram bots., 1-5 kilo dms gram. .57 • —
Vitamin B_{12}, oral grade solids in containers of 1 and 10 gram of B_{12} activity gram.52.00 • —
0.1% trituration of cryst. B_{12} with dicalcium phosphate or mannitol, 1-10 kilo.52.00 • —
Vitamin B_{12}, 0.1% trituration of cyanocobalmin, USP, with dicalcium phosphate or mannitol gm.52.00 • —
USP solution of cyanocobalamin (5,000 micrograms per cc.), 5-gram bots gram.52.00 • —

Vitamin B_{12}, 0.1% vitamin B_{12}, USP, adsorbed on gelatin, 100 and 500-gram bots on 1-5 kilo, dms. gram. .57 • —
Vitamin B_{12}, 0.1% cobalamin concentrate, NF adsorbed on resin 500-gram bots. 1-5 kilo dms. frt. alld gram. .57 • —
Vitamin B_{12}, 0.1% cobalamin concentrate in gelatin, 1-10 kilo, dms., frt. alld gram. .57 • —
Vitamin C (see Ascorbic acid).
Vitamin D_2 (see Codliver and Fishliver oils, Calciferol and Viosterol)
Vitamin D, dry, 850,000 units per gram, kilo lots kilo.42.50 • —
850,000 units per gram less than kilo lots kilo.45.00 —
Vitamin E (see a-Tocopherol and Wheat germ oil).
Vitamin H (see Biotin)
Vitamin K, active (see Menadione).
Vitamin K_1, 25-gram lots gram. 4.50 • —
Violet methyl toner (see Methyl violet toner).
VM&P naphtha (see Naphtha, VM&P, petroleum).

W

Wahoo root bark, bls lb. 2.10 • —
Warfarin, 0.5%, dms., 50-lb. lots, dlvd lb. 1.95 • —
dms. 25-49-lb. lots, New York or Chicago lb. 2.05 • —
Warfarin, 0.51%, dms., 5-24-lb lots, New York or Chicago lb. 2.15 • —
Watchung-type reds, bbls lb. 1.95 • —

WAXES
Wax quotations are listed individually. For example, prices on Wax, carnauba, may be found in the C's under Carnauba wax.

Wheat germ oil, 5-gal. dms. gal.12.25 • —
White lead (see Lead, white).
White mineral oil (see Mineral oil, white).
White pine bark, rossed, bls. lb. .21 • .23
White precipitate, USP, powd., dms., 100 lbs. f.o.b. works lb. 5.50 • —
Whiting (see Calcium carbonate).
Wild cherry bark, thin, nat., bls. lb. 22 • —
Wintergreen oil, USP nat. northern, cns lb. 6.35 -17.50
USP, nat. southern cns lb. 3.75 - 7.00
Wintergreen oil, syn. (see Methyl salicylate).
Witch hazel bark, bls. lb. .20 • .25
Witch hazel leaves, bls. lb. .35 • .40
Wollastonite fine paint grade, bgs., c.l., works ton.41.00 • —
bgs., t.c.l., ex whse ton.51.00 • —
medium paint grade, bgs., c.l., works ton.29.00 • —
bgs., t.c.l., ex whse. ton.39.00 • —
Wood alcohol (see Methanol).
Wood oil (see Tung oil).
Woolfat crude (see Degras).
Woolfat USP (see Lanolin).
Wormseed Levant bgs lb. 2.50 • —
Wormseed oil (see Chenopodium oil NF).
Wormwood oil, cns lb. 4.75 • —

X

Xylene, coaltar, indust., tanks, works:
Bethlehem, Pa. gal. .29 • —
Birmingham dist. gal. .29 • —
Chicago dist. gal. .28½- —
Cleveland dist. gal. .29 • —
Geneva, Utah gal. .29 • —
Johnstown, Pa. gal. .29 • —
Lackawanna, N.Y. gal. .29½- —
Lone Star, Tex. gal. .27 • —
Lorain, Ohio gal. .29 • —
Middletown, Ohio gal. .30 • —
Minnequa, Col. gal. .29 • —
Philadelphia dist. gal. .29 • —
Pittsburgh dist. gal. .29 • —
Sparrows Point, Md. gal. .29 • —
Syracuse gal. .29 • —
Terre Haute, Ind. gal .29 • —
Youngstown, Ohio gal. .29 • —
Xylene, petroleum, indust., tanks, f.o.b. works:
Bayonne, N. J gal. .29 • —
Baytown, Tex. gal. .27 • —
Charleston, S. C. gal. .29 • —
Chicago, Ill gal. .28½- —
Detroit, Mich., dlvd gal. .27½- —
Houston, Tex. gal. .27 • —
Philadelphia, Pa. gal. .29 • —
Providence, R. I. gal. .30 • —
Sewell's Point, Va. gal. .28 • —
Wood River, Ill gal. .28½- —
m-Xylene, 95%, dms., c.l., f.o.b., Richmond, Calif lb. .21 • —
dms., t.c.l., f.o.b., Richmond, Calif lb. .22 • —
tanks, frt. alld. lb. .19 • —
o-Xylene, dms., c.l., works lb. .08 • —
dms., t.c.l., works lb. .09 • —
tanks, works lb. .06 • .06½
p-Xylene, dms., c.l., works lb. .20 • —
dms., t.c.l., works lb. .21 • —
tanks, frt alld lb. .1645- —
Xylenol, cryst., 45°-47°C., m.p., dms., t.c.l., works, frt. equald lb. .23 • —
56°-58°C., m.p., dms., t.c.l., works, frt. equald lb. .33 • —
60°-62°C., m.p., dms., t.c.l., same basis lb. .40 • —
Xylenol fraction, b.r. 7°-9° C., dry above 227° C., dms., c.l., same basis gal. 1.25 • —
dms., t.c.l., same basis gal. 1.30 • —
tanks, same basis gal. 1.05 • —
b.r. 7°-5° C., dry at or below 227° C., dms., c.l., same basis, gal. 1.35 • —
dms., t.c.l., same basis gal. 1.40 • —
2,4-Xylidine, tech., dms. frt. alld. lb. 1.15 • —
2,5-Xylidine, tech., dms., frt. alld. lb. 1.20 • —
Xylidines, mixed, o-m-p, dms., c.l., or t.l., works lb. .39 • —
dms., t.c.l., same basis lb. .40 • —
tanks, same basis lb. .38 • —

XYLOL
Xylol quotations, both coaltar and petroleum, may be found under Xylene.

Y

Yara yara oil, cns. lb. 2.15 - 3.05
Yeast, brewers, debittered, USP XV, Saccharomyces dlvd lb. .27 • —
Yeast, primary, USP XV, 150 mcg. B_1 per gram, 100-lb. dms lb. .47 • —
270 mcg., B_1 per gram, 100-lb. dms lb. .52 • —
300 mcg., B_1 per gram, 100-lb. dms lb. .56 • —
900 mcg. B_1 per gram, 199-lb. dms lb. .60 • —
Torula, USP dlvd. lb. .18 - —

YELLOW PIGMENTS
Yellow pigment quotations are listed individually. For example, prices on Yellow, benzidine, may be found in the B's under Benzidine yellow

Yerba santa leaves, bls lb 40 45
Ylang Ylang oil, Bourbon, bots lb. 7.00 -22.00
extra, bots lb.24.00 -33.00
Yohimbine hydrochloride, bots., tins. oz. 3.75 4.25

Z

Zein, 50-lb. bgs., c.l., t.l., f.o.b. works lb. .37 - —
60-lb. bgs., smaller lots, f.o.b. works lb. .41 - .44
Zinc acetate, NF, VIII, dms lb. .53 —
Tech., dms., t.t.l., works lb. .2950- —
Zinc borate bgs., 1,000 lbs or more, works lb. .25 • —
bgs. less than 1,000 lbs., same basis lb. .27 • —
Zinc chloride NF, gran., dms lb. 42 • —
NF precip., powd., dms lb. .26 • —
Tech., soln. 50%, dms., c.l., works 100 lbs 5.80 • —
dms., t.c.l., works 100 lbs 6.40 • —
tanks, works 100 lbs 5.15 • —
fused dms. c.l., works 100 lbs.10.70 • —
dms., t.c.l. works 100lbs.11.20 • —
Tech. gran., fib. dms., c.l., works 100 lbs.11.45 • —
fib dms. t.c.l. works 100 lbs.11.95 • —
Zinc chromate bbls., dlvd. lb .29 • —
Basic bbls. dlvd. lb. .34 • —
Zinc cyanide dms., 1,000-lb. lots or more, works lb. .55 • —
dms. smaller lots, works lb. .57 • —
Zinc dust coml. bbls., c.l. works. lb. .16 - —
Pigment, bbls., c.l., works lb. .15½- —
bbls., t.c.l., works lb. .17¼- —
Zinc fluoride, bbls., works lb. .49 .50

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Zinc hydrosulfite, dms., c.l., frt. alld	lb.	.21½-	—
dms., l.c.l., frt. alld.	lb.	.23½-	—
Zinc metal, prime western, slabs, E. St. Louis	lb.	.11½-	—
Prime western slabs, New York.	lb.	.12	• —
Zinc naphthenate liq. 8% Zn., dms., frt. alld	lb.	.27	• —
10% Zn., dms., frt. alld.	lb.	.33	• —
Zinc nitrate, tech., flake, 100-lb. fib. dms., l.c.l.	lb.	.16½-	—
300-lb. fib. dms. l.c.l.	lb.	.14½-	—
300-lb. fib. dms., c.l.	lb.	.14	• —
Zinc oxide pigment, American process, lead-free bgs., c.l., f.o.b. works	lb.	.12½-	—
bgs., l.c.l., 10 tons or more, same basis	lb.	.13	• —
bgs., l.c.l., smaller lots, same basis	lb.	.13½-	—
Zinc oxide, leaded, 35%, bgs., c.l., mills, f.o.b. works	lb.	.14	• —
bgs., l.c.l., 10 tons or more, same basis	lb.	.14½-	—
Zinc oxide, pigment, American process, leaded, 50%, bgs., l.c.l., 10 tons or more, same basis	lb.	.14½-	—
Zinc oxide, pigment, French process, green seal, bgs., c.l., f.o.b. works	lb.	.14½-	—
bgs., l.c.l., 10 tons or more, same basis	lb.	.15	• —
Zinc oxide, French process, green seal, bgs., l.c.l., smaller lots, same basis	lb.	.14½-	—
red seal, bgs. c.l. same basis.	lb.	.14	• —
Zinc oxide, French process, white seal, bgs., l.c.l., 10 tons or more, same basis	lb.	.15	• —
bgs., l.c.l, smaller lots same basis	lb.	.15½-	—
same basis	lb.	.15¾-	—
Zinc oxide, white seal, bgs., c.l., same basis	lb.	.14¾-	—
bgs., l.c.l., 10 tons or more, same basis	lb.	.15½-	—
bgs., l.c.l., smaller lots,			
Zinc oxide, USP, 50 lb.-dms., c.l., frt. alld.	lb.	.15¾-	—
50 lb.-dms., l.c.l., 10 tons or more, same basis	lb.	.16¼-	—
50 lb.-dms., l.c.l., smaller lots, same basis	lb.	.16¾-	—
Zinc phenolsulfonate. NF gran., dms	lb.	.45	.46
NF. powd., dms.	lb.	.48	.49
Zinc resinate, precip. 7.2-7.6% Zn., dms., frt. alld	lb.	.45	• —
Zinc silicofluoride dms. works	lb.	.12½-	.14
Zinc stearate USP, ctns., c.l.	lb.	.41	• —
	lb.	.41	• —
ctns., l.c.l.	lb.	.42	• .46
Zinc sulfate, powd., monohydrate, 36% Zn, bgs. c.l. dlvd.E	100 lbs.	8.00	• —
bgs., l.c.l., dlvd. E	100 lbs.	9.00	• —
Zinc sulfate in bbls 40c higher			
Zinc undecylenate 75-lb fib. dms., f.o.b. works	lb	2.04	• —
Zinc, yellow (see Zinc chromate)			
Zinc-ammonium chloride, bgs., c.l., works	100 lbs.	10.25	• —
bbls. c.l., works	100 lbs.	10.85	• —
bbls. l.c.l. works	100 lbs.	11.35	• —
Zinc-formaldehyde sulfoxylate, basic, 300-lb dms., frt. alld	lb.	.26	• —
Normal, 250-lb dms., frt. alld	lb.	.55	• —
bgs., 5 tons to c.l., works	lb.	.03⅜-	—
Zircon (G) gran., bgs., 5 tons to c.l., works	lb.	.03⅜-	—
bgs., 1 ton to 9,999-lb lots, works	lb.	.04	—
bgs., smaller lots, works	lb.	.06½-	—
Milled, bgs., c.l., works	lb.	.04⅛-	—
bgs., 5 tons to c.l., works	lb.	.04⅜-	—
bgs., 1 ton to 9,999-lb. lots, works	lb.	.04⅜-	—
bgs., 500 1,999-lb. lots, works	lb.	.07½-	—
Zircon (G) in barrels 1c. higher.			
Zirconium acetate soln., 13% ZrO_2, dms. c.l. 30,000 lbs. min., works	lb.	.23	• —
Zirconium hydride powd. electronic grade, dms., works	lb.	14.00	-15.00
Zirconium oxide, CP, white, grd., bbls or bgs. works	lb.	1.50	• —
Electric-fused lump, bgs. 500 to 1,999-lb lots, works	lb.	.48½-	—
bgs., smaller lots, works	lb.	.51	• —
milled, bgs. c.l., works	lb.	.62	• —
bgs., 5-ton lots, works	lb.	.62½-	—
bgs., 1-ton to 9,999-lb. lots, works	lb.	.63½-	—
bgs., 500 to 1,999-lb lots, works	lb.	.64	• —
bgs., smaller lots, works	lb.	.66	• —
Glass polishing grade, 94-97% ZrO_2, bgs. works	lb.	.55	• .65
Opacifier grade 85-90% ZrO_2 bgs.,	lb.	.27	• .50
Stabilized oxide 91% ZrO_2, milled, bgs	lb.	.62	• .85
Zirconium oxychloride, cryst., ctns., 5-ton lots. works	lb.	.37½-	—

Aluminum Alkyls:

—*Continued from page 4*

made last week by Texas Alkyls. All Ethyl would say was that its prices, too, range from 90 cents to $1.50.

Texas Alkyls was founded in 1959 as a joint enterprise by Hercules Powder Company and Stauffer Chemical Company, and originally planned a 1 million pound per annum aluminum alkyl plant. When the project went on stream early in 1960 capacity had already been raised to 2 million pounds.

In addition to extending plant capacity, the recent expansion permits a substantial diversification of Texas Alkyls' product line. Initially the company produced two aluminum alkyls in major quantities, triethyl- and tri-isobutylaluminum. Now it is making some twenty products and has a number of others in development.

Some of the new products now being made on a commercial scale by Texas Alkyls are: tri-n-butylaluminum, isoprenylaluminum, diisobutyl-aluminum hydride, diethylaluminum chlorides and methyl- and ethyl-aluminum sesquichlorides. Other compounds being made in developmental quantities include di-isobutylaluminum chloride, monoethyl-aluminum dichloride, monoisobutyl aluminum dichloride, tri-n-octyl-, tri-n-propyl-, tri-n-hexyl-, and tri-n-decylaluminum.

Several laboratory scale compounds, such as diethylaluminum fluoride, ethylaluminum difluoride and the respective methyl chlorides, are now scheduled to be produced in developmental lots.

Texas Alkyls is managed by Stauffer's Anderson Chemical Division. Anderson is also the exclusive sales agent for Texas Alkyls' output.

Chemical Tariffs

—*Continued from page 5*

by member nations, involving the status of cartel regulations in the Common Market.

The Germans have proposed a regulation which would essentially require registration of all cartel agreements and allow all to continue which could prove they were in the public interest.

The French, on the other hand, are pressing for legislation which will be aimed at attacking market dominance by one or a few firms instead of cartel registration.

This means that the German proposal would be tough on the maze of secret French cartels, while the French proposal would hit at some of the huge German companies.

Bids Wanted

Aluminum Sulfate, Hydrated, Assy: water-soluble alumina (Al_2O_3) 17% min., iron (Fe_2O_3) 0.75% max., Type II, Class 2, FSN 9YF 6810-174-5134, Spec O-A-429(2) dtd 11 May 56, 903,000 lbs to be delivered at origin or Great Lakes, Ill. and Oakland, Calif., balance to various destinations, 934,700 lbs., 3 items. Bid IFB 160-422-62B Nov. 21. Yards and Docks Supply Office, Port Hueneme, Calif. Attn: Purchasing Division.

Carbon Tetrachloride, Technical, Fed Spec O-C-141A, 50-55 gallon drums, 14,900 gallons total. Bid IFB 04-611-6291B Nov. 27. Directorate of Procurement, Headquarters, Air Force Flight Test Center, Attn: FTKLC, Edwards Air Force Base, Calif.

Ethyl Alcohol, contains grade I ethyl alcohol (C_2H_5OH) 94.9% min. by volume, dyed red with fuchsin, FSN 9YF 6810-810-1044, Spec MIL-E-463A dtd 30 Apr. 57, Delivery to various destinations, 27,550 gals., 2 items. Bid IFB 160-430-62B Nov. 16. Yards and Docks Supply Office, Port Hueneme, Calif., Attn: Purchasing Division.

Lacquer, Spec Fed TT-L-40, 1,354 drums, delivered to Columbus General Depot, Ohio. Bid IFB 63077-1131-62B Nov. 16. Military Industrial Supply Agency, 700 Robbins Ave., Philadlephia 11, Pa.

Lacquer, Spec MIL-L-18389 (Ships) Type I, 1,045 pails, various destinations. Bid IFB 63077-1158-62B Nov. 17. Military Industrial Supply Agency, 700 Robbins Ave., Philadelphia 11, Pa.

Methanol, Reagent, methyl alcohol, CH_3OH, assy CH_3OH 99.85% Grade A, FSN 9YM 6810-275-6010, 6011, Spec O-M-232d dtd 16 June 60, Various destinations, 72,980 gals., 3 items. Bid IFB 160-427-62B Nov. 16. Yards and Docks Supply Office, Port Hueneme, Calif., Attn: Purchasing Division.

Paint, acrylic emulsion, for application to exterior masonry surfaces, 1 lot, destination to be furnished. Bid IFB ENG-16-047-62-7 Nov. 27. Military Procurement Branch, U. S. Army Engineering Dist., New Orleans 4400 Dauphine St., New Orleans 40, La.

Paint, term contract, indefinite quantity, 31 items, from date of award through 11/30/62. Bid IFB KCS-F-2844 Nov. 28. General Services Administration, Region 6, Business Service Center, 2306 Bannister Rd., Kansas City 31, Mo.

Paint, in accord/w following Federal Specifications: 1.) TT-P-24A; 2.) TT-P-143A and Amend 1; 3.) TT-P-102 and Amend 2; 4.) TT-P-71D; 5.) TT-P-91A; 6.) Interim Fed Spec TT-P-0086B. Term contract, indefinite quantities. Bid IFB DA-12255 Dec. 5. General Services Administration, Business Service Center Region 7, 1114 Commerce St., Dallas Tex

Perchloroethylene (Tetrachloroethylene), in accord/w Fed Spec O-P-191A, term contract, indefinite quantities. Bid IFB DA-12252 Nov .30. General Services Administration, Business Service Center, Region 7, 1114 Commerce St., Dallas, Tex.

Primer Coating, Spec Fed TT-E-543, 10,000 gal., to be delivered to NSC Bayonne, N. J. Bid IFB 63077-1153-62B Nov. 17. Military Industrial Supply Agency, 700 Robbins Ave., Philadelphia 11, Pa.

Sodium Phosphate, Tribasic, Anhydrous, assy: 39.5% min. phosphoric anhydride P_2O_5, FSN 9YF 6810-664-7487, Spec O-S-642(3) dtd 16 Sep 60, Delivery to various destinations, 274,400 lbs., 2 items. Bid IFB 160-429-62B Nov. 22. Yards and Docks Supply Office, Port Hueneme, Calif., Attn: Purchasing Division.

Trichloroethylene, $ClHC{=}CCl_2$, FSN 9YF 6810-184-4794, 4800, Spec O-T-634a dtd 17 Apr 56, Delivery to various destinations, 168,940 gal., 4 items. Bid IFB 160-424-62B Nov. 22. Yards and Docks Supply Office, Port Hueneme, Calif. Attn: Purchasing Division.

Turpentine, Spec Fed TT-T-801A, 27,000 gal., various destinations. Bid IFB 63077-1156-62B Nov. 17. Military Industrial Supply Agency, 700 Robbins Ave., Philadelphia 11, Pa.

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Consistency in Paint		Low	Low	Medium	Low	Medium Low	Low
Specific Gravity		5.95	5.85	5.85	5.75	5.75	5.70
Weight Per Solid Gallon (Pounds)		49.56	48.73	48.73	47.90	47.90	47.48
One Pound Bulks (Gallons)		0.02018	0.02052	0.02052	0.02088	0.02088	0.02106
Per cent Zinc Oxide (Approximate)		50	65	65	82	82	88
Per cent $PbSO_4$—PbO (Approximate)		50	35	35	18	18	12
Per cent Basicity (Expressed as Lead Oxide-PbO)		12–14	6.5–8.5	6.0–7.5	7–7.5	6–7	0.5–1.0
Specifications	ASTM	D80–41	D80–41	D80–41	D80–41	D80–41	D80–41
	Federal		TT-Z-321a	TT-Z-321a			

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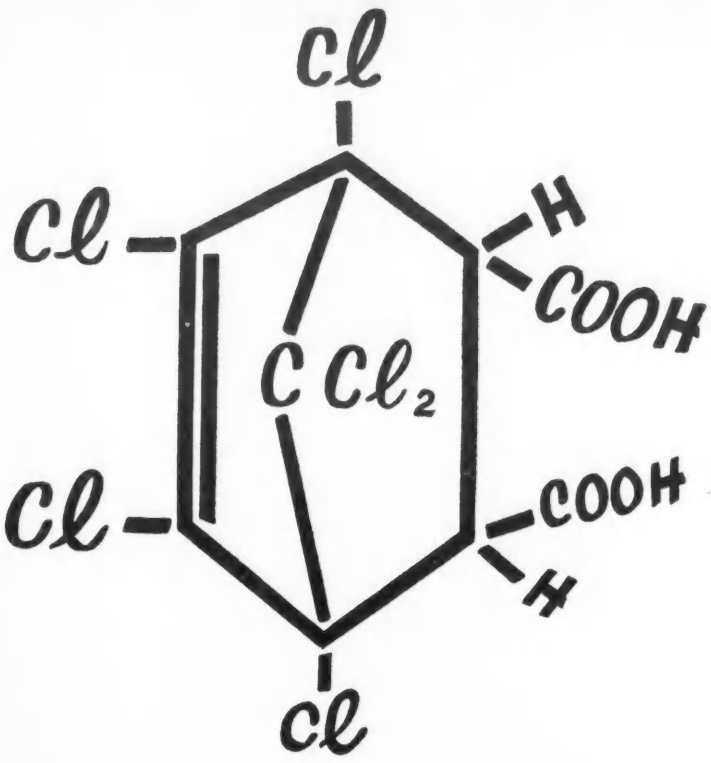

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Nitric Acid Outlook Good Here, But Japanese Really Whoop It Up

Nitric acid consumption in the US can be expected to pick up to about 3.4 million tons this year compared with 1960's total of 3.3 million tons, provided current brisk business is maintained through the last quarter. So far, consumption for the first eight months in the US is 2,191,913 tons compared with 2,145,945 tons in the comparable period of 1960. While market prospects look good enough in the US, things are really popping overseas—particularly in Japan.

The Japanese Ministry of International Trade & Industry (MITI) reports that this year's capacity for nitric in Japan (98 percent basis) of 204,800 tons will rise to 231,400 tons by 1963.

While potential is growing, there are expected to be some mild dislocations. This is because MITI believes that capacity during 1961 and 1962 will only be about 72.4 percent utilized.

One chemical company is about to bring on stream a 2,000-metric-ton-per-month plant at Toyama. According to the British publication *Nitrogen*, the unit will supply needs for isocyanates, caprolactam and the like.

Nitrogen says that this unit will undoubtedly be expanded to 3,000 tons a month. Another company is installing 6,000 tons-a-month capacity to meet its rising capro and tolylene ti-isocyanate needs.

By 1963, production of nitric acid in Japan is expected to reach 189,800 tons, compared with 140,052 tons produced in 1960. Utilization of capacity in '63 is scheduled at 81.6 percent, compared with a whopping 97.4 percent in 1960.

Meanwhile, Japan continues to change the hydrogen raw material basis for its nitrogen industry. Liquid and gaseous hydrocarbon sources for hydrogen for ammonia and nitric acid in 1963 will be 94 percent of the total, as against only 57 percent now.

Nitric Demand: Japan*

	1960	1963
Industrial explosives	8,658	8,900
Celluloid	4,535	5,700
Nitrocellulose	5,557	7,510
Dyestuffs	17,074	22,400
Tolylene di-isocyanate	.....	14,700
High-analysis fertilizer	17,241	28,000
Ammonium nitrate (tech)	20,937	28,000
Fertilizer	24,918	28,000
Others	36,077	46,700
Exports	1,275	2,000
Total	136,272	189,800

*Metric tons. Source: *Nitrogen*.

Acids

Sulfuric—Capacity in the US will be expanded by 900 tons a day. In most recent developments, a producer will put up a 150-ton-per-day unit in Hobbs, N.M., using hydrogen sulfide and recovered sulfur as raw material.

Another unit, to go up in Marseilles, Ill., will have a daily capacity of 750 tons, most of which will go into agricultural chemical production.

Current market could show some improvement, sellers say. They point to steel's floundering around as an example. During the week ended November 4, American Iron & Steel Institute reported output at 2,044,000 tons.

The previous week's output was 2,057,000 tons. Thus far, production has totaled [illegible] with 87,504,000 tons for the same period last year.

Bases and Salts

Barium Acetate—Price for chemically pure electronic grade will move up Wednesday (November 15) on spot and December 1 on contract. On those dates, material will be newly quoted at 49 cents a pound, drums, ten-drum-lots or more; 50 cents, five to nine drums; and 51 cents, single drums. The price increase amounts to 3 cents a pound across the board.

Calcium Nitrate—Purified calcium nitrate will rise 3 cents a pound on spot Wednesday (November 15). Single-drum lots will be quoted at 34 cents a pound. Contract prices will go up December 1.

Caustic Soda—Demand is holding about steady, with sellers' reaction mixed regarding October sales. Some say they had hoped for a stronger month, since November and December business can be expected to taper off owing to inventory-conscious purchasing agents. Others feel that industrial demand will hold up right on through the year-end period.

There is some trepidation among eastern producers regarding announced expansion of a plant which will bring on considerable production capacity in the mid-Atlantic area late next year. This comes in the face of current lengthy supplies in some areas.

Overseas demand this year, particularly from Latin American countries, has not been as high as last year during the comparable period, it's reported. Key to uncertainty has been the Cuban and, more recently, Brazilian situations.

The latter nation recent political uncertainties have forced the cruzeiro to new lows. Chemical business is expected to pick up to some extent when exchange becomes more stable.

Chlorine—Buying interest for chlorinated organics continues to pace this market. A recent increase in contract placement with vinyl chloride producers was precursor of a monomer price advance.

Market for chlorinated solvents is adversely affected by heavy imports. However, demand for chlorinated benzenes has been strong, particularly for monochlorobenzene for DDT to satisfy government overseas requirements for International Cooperation Administration and United Nations programs.

Colemanite—A calcium-sodium borate solution dropped by bombing planes is credited with curbing the most disastrous fire in the history of southern California.

At one point last week, two huge brushfires were in danger of uniting and sweeping everything before them. However, their meeting was prevented by "borate bombing" during which the area between the two fires was drenched with more than 120 tons of solution.

The calcium-sodium borate is mixed one-to-four with water in a slurry and dropped on threatened areas from low altitudes. One advantage is that the presence of the borate mineral prevents the water containing it from evaporating.

Once on the ground, the product's function is twofold: it coats foliage to prevent or inhibit fire, and it actually lowers temperatures at the fire head.

Lead Acetate—Price increases scheduled for Wednesday (November 15) on spot and December 1 on contract will go through as planned despite a half-cent drop in the price of lead metal last fortnight.

It's pointed out that acetate demand as it stands now is considerably less than in previous years; hence, since volume is lower, production costs have steadily risen.

Nowadays, the price of lead metal, a basic raw material, has much less influence on acetate prices. Therefore, advances of 1½ cents a pound for technical and 3

Price Trends

Advanced

Sodium silicofluoride, ½c. per lb.
Tin, Straits, 1c. per lb.

Reduced

None

Comparative Price Indexes

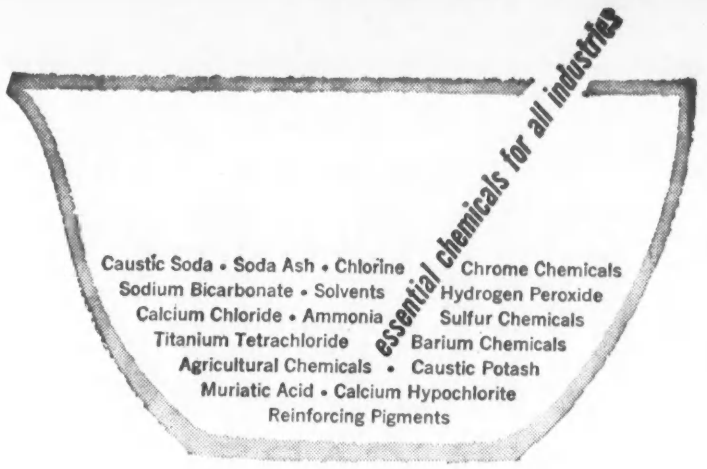
(100=1949 average)

Last week	Prev. week	Last month	Nov. 11, 1960
106.64	106.64	106.63	106.88

For Current Prices See Page 11

Paper Production Higher

The American Paper & Pulp Association reported paper production for the week ended Nov. 4 at 95.4 percent of theoretical capacity, as compared with the revised figure of 94.7 percent for the previous week and 91.8 percent for the corresponding week of last year.



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Heavy Chemicals

cents for purified will go through as scheduled.

Where acetate has lost out, it's said, is in the paint drier market. In older paint and varnish formulations, large amounts were used as a drying agent.

However, with the advent of a large number of more versatile metal soaps such as cobalt naphthenate, the tallates and other metallo-organic driers, the acetate has lost considerable ground.

Remaining demand is holding up well all through the end-use pattern, however. This goes for such applications as chemical synthesis, and use in the color industry.

Sodium Silicofluoride—A large producer put up the price half a cent a pound effective on spot last Thursday (November 9). Sodium silicofluoride is now quoted at 7 cents a pound, bags, carlots, f.o.b. works, freight equalized 7¾ cents, less carlots, same basis.

Drum prices remain 4/10-cent per pound higher. Contracts will be affected by the new prices January 1. Higher costs are cited as reason for the move.

Sulfur—The following figures from the Bureau of Mines show output, shipments, sales, stocks and imports of sulfur for specified periods, in long tons.

	August	*July*
Native sulfur:		
Production	499,134	487,283
Shipments	436,263	414,566
Sales	412,109	347,744
Stocks	4,056,448	3,969,423
Recovered sulfur:		
Production	72,937	67,405
Shipments	67,743	59,452
Sales	67,357	56,854
Stocks	122,572	116,992
Imports:		
Ore, Canada	5,172	6,628
Mexico	.....	5,600
In any form, Canada	10,721	7,829
Mexico	78,052	62,112

* Revised.

Nonferrous Metals

Copper—Metal held unchanged, quoted at 31 cents a pound, delivered, Valley basis.

Lead—Market held steady at 10½ cents a pound, New York and 10 cents, East St. Louis, following earlier price breaks.

Tin—Market fluctuated narrowly and ended the week at $1.24 per pound, spot, for Straits metal, up 1c.

Heavy Chemical Briefs

WORLD SULFURIC BOOM: World output of sulfuric acid reached 50.4 million tons last year, according to British Sulphur Corporation. This represents a growth of 84 percent in the last decade.

AEC CORRECTION: OPD erroneously reported a contract award to Dow Chemical Company of $25,000 for hydrofluoric acid (HF) in its October 16 issue. The chemical actually is hydrochloric acid (HCl).

CARBON TET FOR AUSSIES: Imperial Chemical Industries of Australia and New Zealand, Ltd., will build a carbon tetrachloride plant at Botany, N.S.W., Australia. The ICIANZ unit, designed by Scientific Design Company of New York, will be completed in late 1962.

The carbon tet will largely be used by manufacturers of chlorofluorocarbons, a new industry for Australia. The latter will be made by two recently-formed companies, Australian Fluorine Chemicals, Pty., Ltd., and Pacific Chemical Industries, Pty., Ltd.

CALCIUM CARBIDE FOR NORWAY: Odda Smelteverk A/S, Norwegian subsidiary of British Oxygen Company, Ltd., is planning to raise calcium carbide production to 80,000 metric tons a year from 30,000 tons by 1966. Odda Smeleverk also produces calcium cyanamide.

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COMPOUNDS AND CHEMISTRY

FDA May Okay Cysteine For Use in Bread Making

Food & Drug Administration is considering an amendment to the bread standards which would permit small amounts of l-cysteine as an optional ingredient in making bread, enriched bread, milk bread, raisin bread and whole wheat bread.

Addition of this amino acid would be for the purpose of facilitating dough handling and to speed production; it would not be for any claimed nutritive value, the agency says.

Officials explain that the addition of this ingredient for the stated purpose of facilitating handling and not for any claimed nutritive value is to guard against any unwarranted claims being made for bread in which the ingredient is used.

They describe l-cysteine as a "good example of a useful food additive."

FDA opposes the enrichment of foods unless done in a scientific manner that benefits consumers and in approving the inclusion of optional ingredients in its food standards follows a policy on food enrichments outlined by the National Research Council.

Acrylonitrile Collision

—*Continued from page 3*

last September, began complaining that while it was uneconomical to produce acrylo at less than 200 yen per kilo, US producers had cut it to the equivalent of 120 yen per kilo.

Furthermore, they were beset by clamoring from acrylic fiber makers Kanegafuchi Asahi Chemical and Mitsubishi Rayon to hack prices in line with those of US producers. At the same time, the consumers ordered US material.

Backed into a box, acrylo makers Mitsubishi Chemical, Nitto Chemical, Toyo Koatsu and Sumitomo Chemical had to cut prices to 170-180 yen per kilo to counter dumping.

Even so, US material laid down c.i.f. Japanese ports is only 160-180 yen—20 yen lower in some cases. The only way the Japanese can counter this price cut, it's believed, is to switch to more economical routes such as the Sohio process which uses propylene and ammonia. For immediate relief, they have set up a holler with the government for protective tariffs.

ICI Can't Compete

ICI apparently is in the same boat. It's reported that the company can't compete economically at present prices. Contrary to published reports, ICI is not ready to produce acrylo from propylene and ammonia at this time, UK observers say.

Booming export business by US makers, with shipments on the way to Japan and the UK, is hitting overseas producers like a bomb. Adding fat to the fire, Erdoel Chemie GmbH is putting up a 55-million-pound-a-year plant at Dormagen, West Germany.

In Japan, Mitsubishi Chemical is expanding its acrylonitrile plant to 30 million pounds a year via the Sohio process; Nitto Chemical is boosting its output to 18 million pounds a year, and Asahi will be making 15 million pounds a year by the same process.

Sumitomo Chemical is studying expansion to 25 million pounds and Toyo Koatsu and Mitsui Chemical will form a joint-venture to expand acrylo output.

Meanwhile, US over-capacity still exists, and it remains to be seen how much acrylo can be shipped overseas before tariff barriers rise. It appears only a matter of time until they do.

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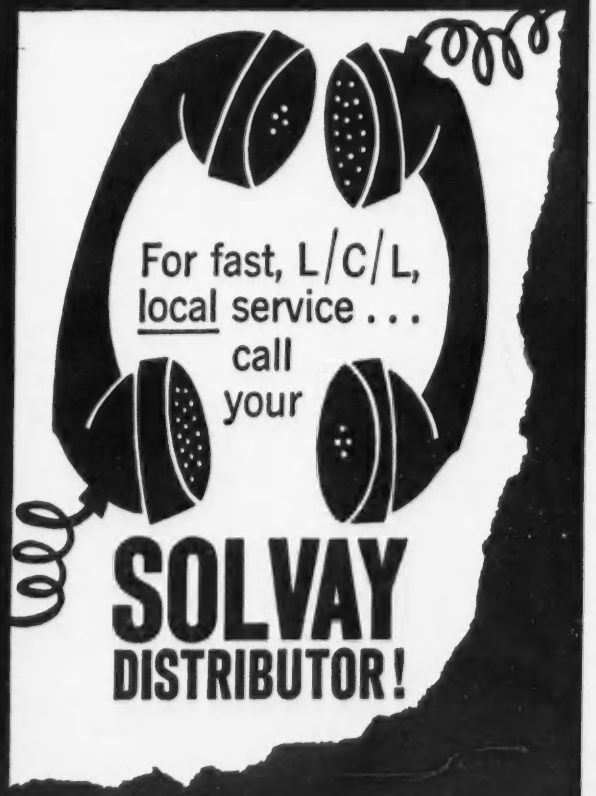

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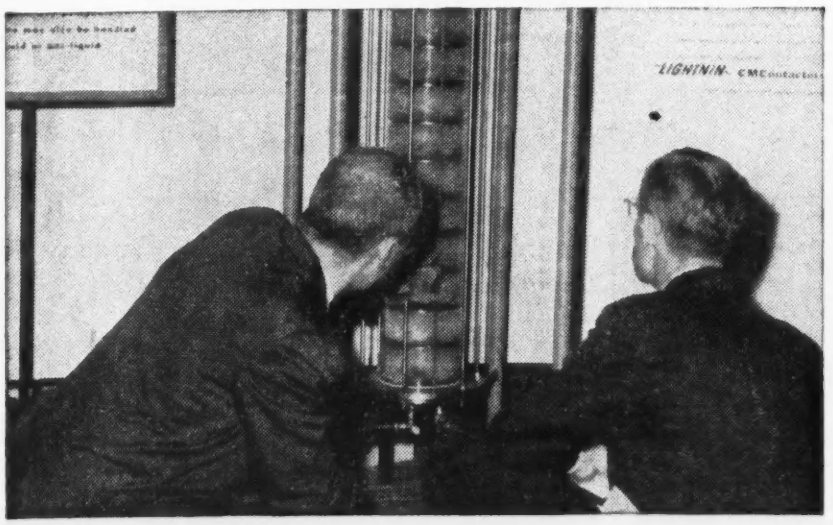

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DuPont Is Granted Patent Covering Blends of Fibers

E. I. duPont de Nemours & Co., Wilmington, Del., has been issued US Patent 3,007,227, covering staple blends of synthetic elastic fibers and either natural or synthetic inelastic fibers and products made from such blends.

The company pointed out that the patent covers a broad variety of blends in which the elastic staple content is less than one-half by weight, with the fibers intermingled to impart cohesion. Also covered are yarns and fabrics made from these blends. The elastic fiber used in the blends has a denier of less than 30, according to the patent.

Tallow Breakthrough

—Continued from page 5

work, is needed, he contends. However, he recommends that the problem not be dumped in the lap of the Department of Agriculture.

"It needs industrial leadership with best brains of users of fats and fatty acids to set the goals," he concludes.

Looking at the record, Mr. Pattison comes up with these facts:

• Annual consumption of tallow in fatty acids over the past four-and-half years is about 380 million pounds annually, about 20 percent of total domestic consumption of inedible tallow—with a significant drop in the past year.

• Tall oil, rather than tallow, has become the major raw material in the fatty acid industry on an input basis. Further, all recent increases in output have come from the tall oil segment of the raw material market.

• One of the biggest single uses for fatty acids—stearic acid for rubber compounding—50 million pounds a year, is strictly a price market and has no incentive for a research-and-development type of approach.

• Regulatory problems imposed on the industry by the food additives act require food-grade fatty acids (stearic in this case) in any direct additives to food.

Rare Earths Booklet Is Published

Michigan Chemical Corporation, St. Louis, Mich., has just turned out a new booklet: "Application for Rare Earth Oxides and Metals." The publication is concerned with applications in nuclear energy, electronics, metallurgy, ceramics and glass.

CARBON BLACK PLANT MANAGER: Marcus J. Graham, appointed manager of United Carbon Company's newest domestic carbon black plant at Mojave, Calif.

Eastman Company Building Labs in Kingsport, Tenn.

Tennessee Eastman Company, a subsidiary of Eastman Kodak Company, is building a development laboratory building for the organic chemicals and acid division at Kingsport, Tenn.

The lab, scheduled to be completed in the spring of 1962 is a part of Eastman Kodak's 1961 capital expenditure budget program.

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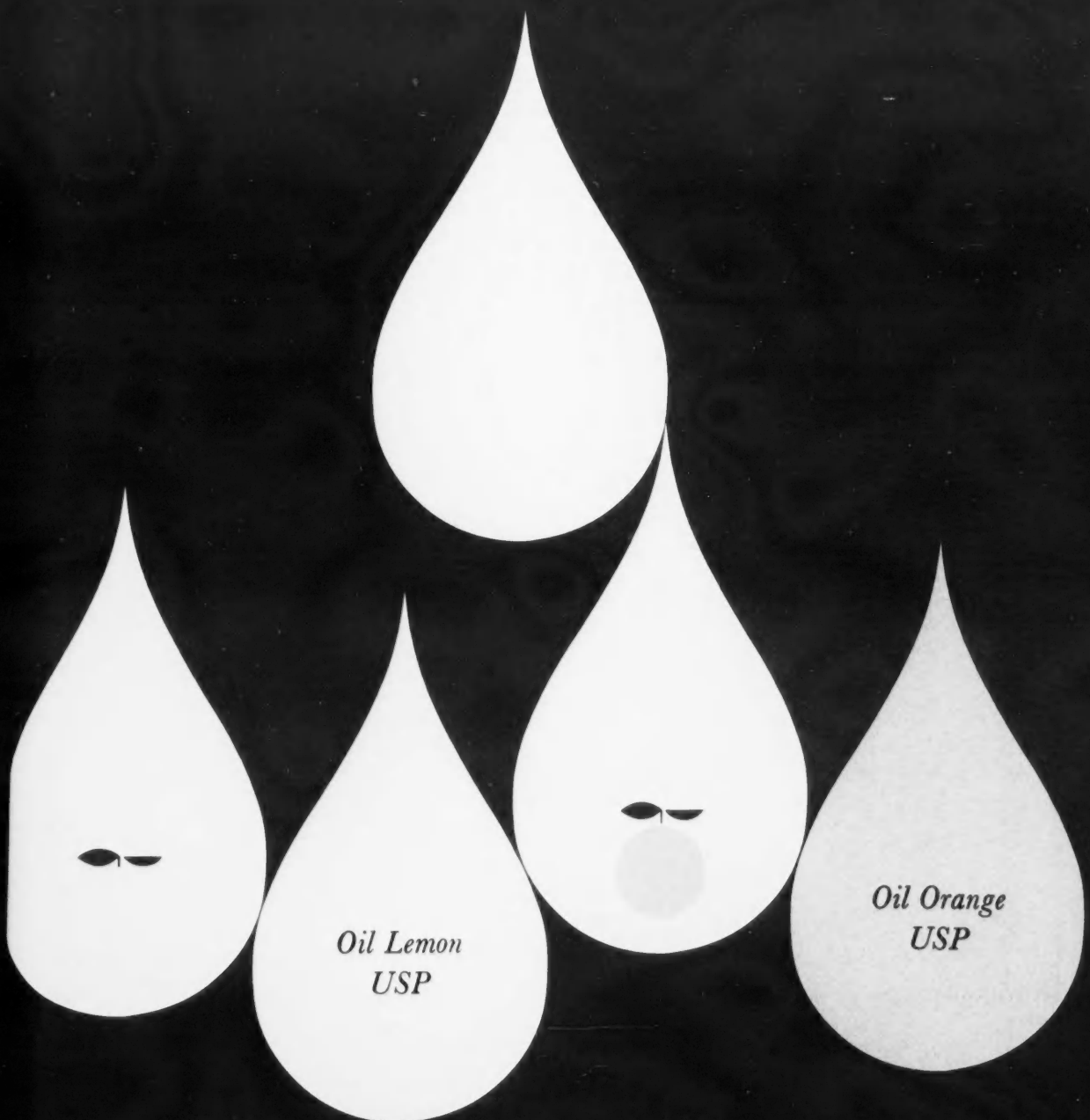

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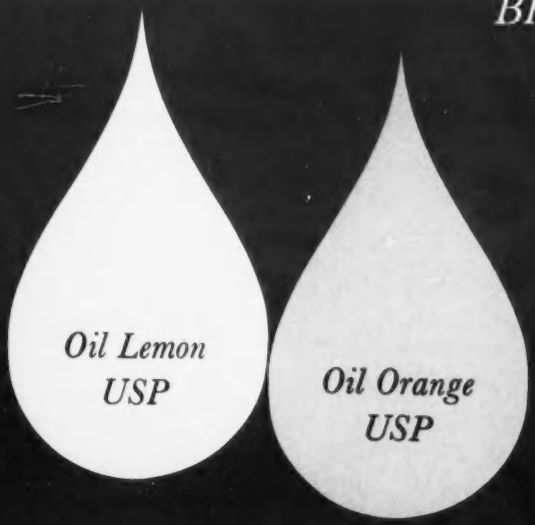

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Agricultural Chemicals

Results are in for potash activity during the 1961 crop year and the balance sheet reveals a mixed bag of advances and declines. Production scored a 9.5 percent gain over the 1960 crop year; sales dropped 11 percent; in 1961 stocks mounted five times over inventories in the previous year; imports were down, and exports climbed 16 percent. Total potash production approached 4.6 million short tons (K_2O equivalent —2.7 million tons) in 1961 as against 4.2 million tons the previous year. Sales, however, plummeted to $4.1 million after racking up $4.6 million in 1960.

Despite the drop in sales the value-at-plant calculated by Bureau of Mines rose to $87.6 million, up from 1960's value of $84.8 million for an average at-plant value per ton of $21.56 as against $18.61 per ton in 1960.

Imports declined in 1961 to 453,000 tons, down 28,000 tons from 1960, but exports gained 18 percent. Shipments to foreign consumers totaled 819,000 tons valued at $28 million, up 114,000 tons and $6 million from 1960.

The stock situation at the end of the 1961 presented the most adverse picture of the lot with 659,000 tons reported in producers' hands as of June 30, as compared with 129,000 tons in inventory on the same date in 1960.

Price Trends

Advanced
None

Reduced
None

Comparative Price Indexes
(100—1949 average)

Last week	Prev. week	Last month	Nov. 11, 1960
111.60	111.58	110.18	111.27

For Current Prices see page 11

Animal and Plant Foods

Ammonium Sulfate—No change in the quiet market picture is reported.

It's still a bit early for early Spring fertilizer demand to make itself felt on sulfate sources say.

Activity may be picking up within the next fortnight, however, with the first moderate upswing for the Spring season expected to commence in the December-January period.

Price is unchanged at $35 a ton for large granular and $32 a ton for standard. No word on off-season discounts has been received as yet.

Ammonia Liquor—Material is reported moving in fair volume on a seasonal basis although sources say liquor demand right now is concentrated in non-fertilizer areas.

For the first time ammonia liquor prices have been set up on an October-forward basis rather than on an October-January schedule.

With the upsurge in ammonia plants producers are letting supply-and-demand determine price for the immediate future, thus allowing themselves a measure of flexibility.

Price for the October, 1961 period-forward ranges from $58 a ton for low-analysis material to $95 for high-analysis liquor.

Potassium Muriate — Germany and France battled it out in the 1961 crop year for the leadership of exports to the US with Germany winding up as the winner by about 4,000 tons.

Germany shipped 128,382 tons of potassium muriate into the US, K_2O equivalent—77,391 tons, while France followed with 124,152 tons.

In third place Spain's shipments amounted to 46,776 tons, and Russia trailed with 26,532 tons. No imports were received from Italy.

Fishmeal—Market is reported firm. Prices remain unchanged at $118 to $120 per ton, Atlantic and Gulf ports.

Pesticides

BHC—Sources intimate that the current price schedule for BHC will remain unchanged next year.

Competition from other pesticides in recent years has put BHC in a squeeze and undoubtedly has much to do with the decision to maintain present postings.

DDT—Off-season volume is moving at the accustomed pace for this time of the year with the recent price cut not stimulating any significant increase in sales.

The new 17c.-a-pound price is not setting too well with some producers but there is no indication at present of any attempt to raise the quotation.

Agricultural Chemical Briefs

DANISH AMMONIA PLANT SET: Dansk-Norsk Kvelstoffabrik of Copenhagen, Denmark, has awarded a design and construction contract for a $5.6 million ammonia plant to Power-Gas Corporation, a unit of the Davy-Ashmore group in Britain. The ammonia plant will be part of a new fertilifizer production center Dansk-Norsk is building at Grenaa in Denmark.

FERTILIZER PLANT FOR CEYLON: ENI, Italy's state-controlled petroleum company, is discussing possible construction of a refinery and a fertilizer plant with Ceylon, according to M. Senanayake, Ceylon's Minister for Industry. Ceylon also has refinery proposals from Yugoslavia, Britain and a consortium of international oil firms.

MITICIDE CLEARED FOR NEW USES: Niagara Chemical Division of Food Machinery and Chemical Corporation, New York, reports that its miticide "Tedion" can now be used on cucumbers and hops for all-season control of two-spotted mite. Food and Drug Administration has established the following "Tedion" residue tolerances; 1 ppm on field and greenhouse cucumbers; 30 ppm on fresh hops, and 120 ppm on dried hops.

Farm Chemical Exports: September

Following are data compiled by Bureau of Census indicating volume of exports of agricultural chemicals for September, 1961 and, for comparison, September, 1960.

		September, 1961	*September, 1960*
Fertilizer			
Ammonia, anhydrous and acqueous	lbs.	8,193,054	13,991,599
Ammonium nitrate	lbs.	570,693	4,100,000
Ammonium phosphate and other nitrogenous and phosphate type fertilizers	S. tons	2,355	14,021
Ammonium sulfate	lbs.	17,134,814	64,886,513
Nitrogenous fertilizer, n.e.c.	lbs.	924,836	18,466,920
Nitrogenous organic waste	lbs.	2,155,403	2,075,559
Phosphate hard rock and Florida land pebble	S. tons	303,110	354,429
Except Florida hard rock	S. tons	72,857	54,170
Phosphatic fertilizer	S. tons	562	145
Potassic fertilizer, n.e.c.	S. tons	8,594	1,939
Potassium chloride	S. tons	61,413	76,077
Sodium nitrate, n.e.c.	lbs.	537,800	198,800
Superphosphate	S. tons	20,117	5,307
Triplesuperphosphate	S. tons	31,694	32,158
Urea	lbs.	6,053,325	43,882,220
Pesticides			
BHC	lbs.	243,116	257,835
p-Dichlorobenzene	lbs.	497,328	646,100
DDT (total)	lbs.	4,887,122	4,517,622
tech.	lbs.	1,510,142	1,086,860
20-74%	lbs.	434,008	464,642
75% or more	lbs.	3,142,972	2,966,120
Pyrethrum extract	lbs.	1,909	3,220
2,4-D, 2,4,5T as parent acid content	lbs.	1,063,195	554,258

n.e.c—Not elsewhere classified.

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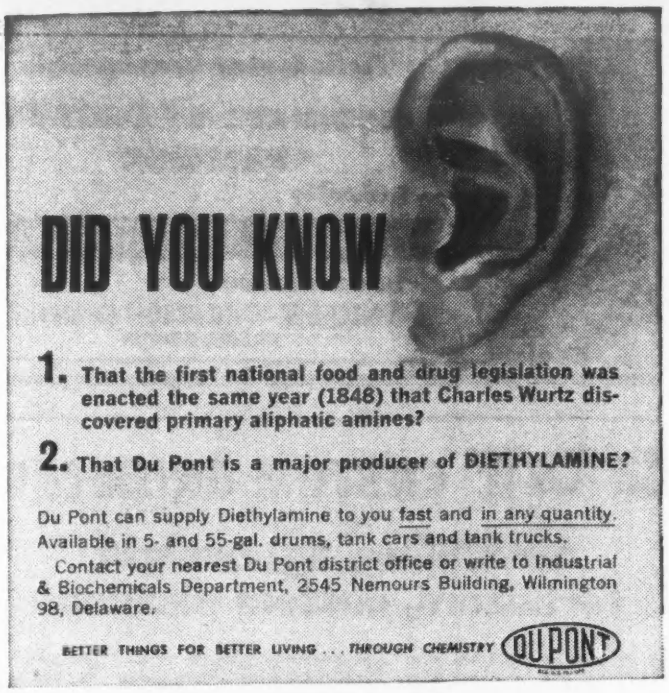
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Aliphatic Organics

Ethanolamines: Crease Processes Could Hypo Mediocre Sales Gains

Sales of ethanolamines will approach 110 million pounds this year, scoring a gain comparable to that of 1960 (3.2 million pounds). Once again, the increase will be directly attributable to normal growth in normal usage, for despite the versatility of these chemicals, there have been no significant end-use developments to spur consumption to the extent that synthetic detergents did in the mid-1950's. New and somewhat promising, however, are two processes—one using monoethanolamine, and the other using monoethanolamine sulfite—for putting permanent creases in men's wool trousers and permanent pleats in ladies' wool skirts.

Developed, respectively, by the Department of Agriculture and the Wool Bureau, Inc., an association of wool growers, the processes are ostensibly designed to give woolen clothing a newness appeal sufficient to offset the increasing popularity of the new synthetic fibers.

Small Market Today for MEA

In terms of MEA usage, of course, this market today is scarcely important. Furthermore, future requirements will be limited not only by the relative success of the "wool" promotion, but also by the low concentration of MEA used and the small amount necessary to do the job.

But like the many, small applications for ethanolamines, it could contribute to overall volume and possibly compensate for losses suffered several years ago when ammonium thioglycolate completely replaced MEA in the hair-waving industry.

Synthetic detergents — primarily the liquids—and gas scrubbing requirements, sources agree, will remain the major markets for ethanolamines indefinitely. Growth in the former area has been and still is quite dramatic.

In the first half of 1961, for example, sales of the liquid syndets rose 13.2 percent, to 349,448,000 pounds, from the comparable period in '60. All told, syndet sales were up 4 percent, to 1.7 billion pounds.

DEA gets into most liquid products and into some of the solids as a foam stabilizer and booster. MEA, because it is easier to recover and more soluble in hydrocarbons, is mainly used for gas scrubbing.

DEA and MEA Account for Volume

Together the two chemicals account for about 75 percent of total ethanolamines demand. Triethanolamine usage is increasing, however, but as the chemical has no big market, the rate of growth is more modest.

Five big chemical firms turn out ethanolamines; all have been in the business for several years. Annual capacities range from 120 million pounds to 10 million pounds.

The industry total is 200 million pounds a year and no expansions or new ventures have been reported, although any ethylene oxide producer can easily enter the field by what is a basically simple manufacturing process.

Several factors act as deterrents, of course, including the fact that expensive stainless steel equipment is required—the ethanolamines are highly corrosive. In addition, considerable excess capacity already exists and it will be some time before sales catch up.

Production of the chemicals, which was 126 million pounds in 1960 and heading for 128 million pounds this year, is, according to some sources, not a good indication of the actual market. It is pointed out that di- and triethanolamine are produced along with the mono, and that production of each cannot be rigidly controlled.

Statistics seem to bear this out. Total output in the past three years has surpassed sales by about 20 million pounds. At the same time, MEA sales and production have been fairly well-balanced, while DEA output has exceeded sales by anywhere from 11 million to 15 million pounds.

Captive consumption, which may not have been reported as sales to the Tariff Commission by some firms, may account to some extent for the inbalance.

Price Trends

Advanced

None

Reduced

Corn syrup, 15c. per cwt.
Dextrine, 20c. per cwt.
Gluconic acid, 1½c. per lb.
Molasses, N.O., ¼c. per lb.

Comparative Price Indexes

(100=1949 average)

Last week	Prev. week	Last month	Nov. 11, 1960
129.65	130.02	130.02	130.70

For Current Prices See Page 11

Butyl Acetate—Exports of butyl acetate dropped from 2.8 million pounds in August to 427,189 pounds in September. The latter month, shipments were valued at $63,197. Major destinations: Mexico, 139,989 pounds valued at $18,200, and Colombia, 72,000 pounds, valued at $11,384.

Butanol exports in September were 2,906,301, the Commerce department reports. Value: $370,558. Principal buyers: Italy, 2,200,117 pounds at $264,014; Canada, 204,813 pounds at $29,692; and the United Kingdom, 201,693 pounds, valued at $30,661.

Ethyl Alcohol—Molasses used in the production of distilled spirits (includes industrial alcohol) in August amounted to about 200,000 gallons, double that used in July but less than 5 percent of the August 1960 volume (5.1 million gallons).

Molasses used for this purpose during the first eight months of the year totaled 7.4 million gallons. This compares with 43.9 million in the same period in 1960, Internal Revenue Service reports.

Gluconic Acid—Prices for technical gluconic acid have been reduced 1½c. a pound across the board. New schedule: tanks, 15½c. a pound; carload or truckload of drums, 18½c. a pound, and smaller lots, 19c. a pound.

Molasses—Markets for feeding cane molasses were weak in the South and at scattered terminals in the Midwest during the week ended November 7. Demand was moderate to slow. New Orleans prices were unchanged to ¼c. lower but mostly 12½c. a gallon.

Puerto Rican producers have sold about 2 million gallons of blackstrap from the 1961-crop production to Puerto Rican dis-

Aliphatics Foreign Trade: September

Exports of selected industrial aliphatic organics for the months of August and September, 1961, as reported by the Bureau of Census, were as follows:

		September	*August*
Acetone	lbs.	3,017,879	880,617
Alcohols, including glycols, n.e.c.	lbs.	8,285,003	13,652,317
Butyl acetate	lbs.	427,189	2,823,829
Butyl alcohol	lbs.	2,906,301	1,986,562
Carbon bisulfide	lbs.	14,400	17,400
Carbon tetrachloride	lbs.	117,860	300,192
Ethyl alcohol	gals.	1,360	1,763
Ethylene glycol	lbs.	4,177,374	12,930,142
Formaldehyde, 40 percent solution	lbs.	245,952	302,100
Glycerine, crude and refined	lbs.	647,430	1,419,603
Methyl alcohol	gals.	2,021,342	3,460,906
Methyl ethyl ketone	lbs.	283,826	600,496
Propyl alcohol	lbs.	526,592	1,549,603

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Aliphatic Organics

tributors at 12c. to 13c. a gallon, but mostly at the lower price.

Sucrose—Louisiana sugar mills ground 712,550 tons of cane and made 54,852 tons of sugar during the week ended October 28. This brought total cane grinding this season to 1,284,175 tons and sugar made to 88,729 tons. Trade reports indicate around 15 percent of the crop has been harvested, Agricultural Marketing Service says.

Vinyl Acetate Monomer—New vinyl acetate monomer capacity, due on stream in late 1961, is going to have a definite affect on the market. Specifically, it will cause a dislocation of sales and possibly this, in turn, will lead to a weaker market. For while demand projections are quite favorable, there is already considerable excess capacity and moving production is going to be a near-term problem of firms which depend largely on open-market business.

Imports of monomer in August amounted to 3,117,541 pounds, valued at $482,302 and dutied at $69,113. Shipping here, as usual, were: Canada, 3,072,620 pounds, valued at $461,250 and dutied at $67,236; Japan, 35,000 pounds, valued at $17,940 and dutied at $1,588; and West Germany, 9,921 pounds, valued at $3,112 and dutied at $319.

Polymer imports in August totaled 137,596 pounds, valued at $88,173 and dutied at $7,588. Canada accounted for 58,523 pounds, valued at $28,820 and dutied at $2,471, and Japan supplied the remainder.

Vinyl Chloride Monomer—The ½c. a pound price advance put through by leading producers of vinyl chloride monomer on November 1 is seen as a step toward stability in what has been over the past year a persistently weak market. Hoped for now is that polymer producers will be able to advance prices accordingly, and what's more make them stick.

Among polymer makers, competition has been extremely keen and this, reportedly, has caused price-cutting and a consequent paring of profits. Cheaper monomer was thus needed to balance out costs and price and until the beginning of the month, that's what buyers got.

Initially, there were doubts that the monomer advance would go through as scheduled by a leading open-market seller of the chemical early last month. Follow-up actions by two captive producers made it no more of a certainty and it was not until announcements by two leading sellers that the advance was virtually assured.

Aliphatic Organics Briefs

ICI GROWING IN NYLON: Imperial Chemical Industries, Ltd., is now completing a program which will boost its nylon 6/6 capacity in Britain to 23,000 metric tons a year. ICI is also said to be considering another increase of 25 to 30 percent for next year.

MONTECATINI IN INDIA: Montecatini, Italian chemical goliath, reports plans for more joint ventures in India. It will contribute know-how and capital participation in four ventures for polypropilene, industrial explosives, methanol and formaldehyde and polystyrene. Montecatini already has three Indian ventures, one in aluminum and two in dyestuffs.

PRICE CUT: Valchem, New York, has reduced the price of ethyl alpha bromopropionate. New schedule: one to nine pounds, $4.60 a pound; ten to 139 pounds, $3.55, and larger quantities, $2.48, f.o.b. Langley, S.C. New manufacturing technics and enlarged production facilities were cited.

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Swiss Are Tapering Off In the Export of Chemicals

Swiss chemical exports last year grew at a 20 percent rate to a total of about $373 million, but shipments in the first half of the current year have substantially slowed to a growth rate of 8.4 percent and a total of $200 million.

That's the word from the industry association Schweizerische Gesellschalt fur Chemische Industries.

The strong points of the Swiss industry continue to show export gains well above average.

Organic product exports in the first half were up 14 percent to $53 million, drugs and dyestuffs each rose about 10 percent to $42.5 million and $52.8 million, respectively.

The European Common market accounts for 37.5 percent of Swiss chemical exports and ECM chemical companies account for 68 percent of the Swiss chemical imports, which totaled nearly $240 million.

Imports rose 12.3 percent in the first half of 1961 to about $130 million.

Fertilizer's Choice

—Continued from page 4

mitting deviations from his gold conservation orders.

Industry sources insist, however, that this is not enough, and that new laws now govern in this situation and procurements must be made from domestic sources unless President Kennedy issues a directive to the contrary.

It is thought that officials are being encouraged to change the "Buy American" policy by the low prices offered by Japan when the Korean fertilizer bids were opened on October 5.

Although the bid invitations were limited to Code Group 898 countries—which excludes such major nitrogen suppliers as Germany, Japan, Italy, France, etc.—Japan submitted tenders nevertheless, offering to supply 100,000 tons of urea and 150,000 tons of ammonium sulfate at prices about 40 percent below those of American suppliers.

Before any contracts were awarded—and none were awarded to Japan since it was ineligible to bid—results of the bidding (including the Japanese offer) were forwarded to Washington for evaluation.

Officials reviewed the results for several weeks and then put a ceiling of $2.69 per metric ton unit c&f basis on the nitrogen that it would finance with mutual aid finds. This meant that contracts for all but $11 million of the $17 million had to be thrown out.

The remaining $6 million is being retendered with the field of competition now opened up to countries in Code Group 899, which includes all free world sources of nitrogen supply.

In addition, another big purchase of nitrogen is involved in the new AID policy—60,000 tons of urea for Pakistan, on which bids are scheduled for opening on November 27.

Industry sources say that if AID is able to maintain its position and demand world-wide competition in purchase of fertilizers under the mutual aid program, American producers will have to price nitrogen at international levels to get any of the business.

This could mean reductions of possibly $10 to $15 a ton for sulfate and $38 to $40 for urea, it is said.

In the light of the current ample nitrogen supply situation in this country, failure of industry to capture business abroad could bring added pressures on the domestic market.

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Oils, Fats and Waxes

Edible vegetable oils remained firm last week, with the exception of peanut and corn which dropped ½ cent. Cottonseed oil was higher as a result of active trading for both crude and refined oil. Soybean oil trading was heavy and market closed firmer. Crude corn oil finally turned easy and sales took place at ½ cent lower. Peanut oil was still in limited supply but heavy sales were made at ½ cent less for later delivery. Crude coconut oil for prompt shipment was steady and slightly higher on the Pacific coast while the New York market was unchanged.

Consumer interest in tallow and greases continued restricted to prompt delivery. Bulk of sales were for domestic needs, while export business was still slow. Offers were more liberal and maintained at unchanged prices.

Among industrial oils, tung was unsettled because of limited consumer interest, causing the market to decline about ½ cent per pound for prompt and later delivery. Brazilian castor oil also was weak and prices were off ¼ cent per pound. Increased supplies of rapeseed oil and light demand brought prices down ½ cent per pound for prompt delivery. Linseed oil remained steady and unchanged. New business was limited, while deliveries against contracts moved in good volume. Crude menhaden oil was inactive with buyers and sellers still ½ cent per pound. Production of this oil has practically ceased for the season on the Atlantic and Gulf coasts. Refined fish oils were in fair demand and steady.

Price Trends

Advanced

Carnauba wax, yellows, 4c. to 5c. per lb.
Cocoa butter, 2c. per lb.
Cottonseed meal, $3 to $4 per ton.
Cottonseed oil, crude, ¼c. per lb.
Refd., ¼c. per lb.
Peanut meal, $2 per ton.
Soybean meal, $3 per ton.
Soybean oil, crude, ¼c. per lb.
Refd. ¼c. per lb.

Reduced

Castor, No. 1, Braz., ½c. per lb.
Corn oil, crude, ½c. per lb.
Refd., ½c. per lb.
Linseed meal, old proc., $1 per ton.
Peanut oil, crude, ½c. per lb.
Refd., ½c. per lb.
Rapeseed oil, ½c. per lb.
Tallow, edible, ½c. per lb.
Tung oil, ½c. per lb.

Comparative Price Indexes

(100=1949 average)

Last week	Prev. week	Last month	Nov. 11, 1960
117.02	115.40	111.59	106.47

For Current Prices See Page **11**

Vegetable Oils

Castor—Demand continued confined to actual needs. No. 1 Brazilian was easier ranging from 16c. to 16¼c. per pound, New York, prompt delivery according to seller. Domestic grades also were in light request.

Imports of castor beans and castor oil at New York and Philadelphia last week were as follows:

	Pounds	
	Castor Beans	Castor Oil
Last week	605.100	600.000
Previous week	.....	4,126.000
Corresponding week, 1960	.....	1,430.000
Total this year	618,450	82,526.000
Corresponding period, 1960	3,353,450	78,960.000

Coconut — Market was steady. Crude was held to 11⅛c. per pound, tankcars, f.o.b. Pacific coast, prompt shipment and 12 [illegible] New York.

General Services Administration last week sold 11,108,380 pounds of crude coconut oil from the government stockpile at prices ranging from 11.77c. to 10.84c. per pound, bulk, f.o.b. location. The government will offer about 14 million pounds on December 19.

Corn—This market became easier and declined ½c. Crude sold at 25½c. per pound, tankcars, f.o.b. mills, prompt delivery. Refined oil was lower at 28.73c., tankcars, New York basis.

Cottonseed—Steady tone prevailed in futures last week on the New York Produce Exchange. Trading was quite active the market closing slightly higher. Active trading took place in cash oil for prompt and forward delivery. Favorable weather continued favorable throughout the belt. Refined salad was moved in good volume at 10.6c. per pound, tankcars, New York basis.

Crude cottonseed oil continued active and higher. Production was heavy but demand kept stocks from accumulating. Prices were firmer, up ¼c. Sales were reported at 12¼c.-12⅜c. per pound, tankcars, mills in the Valley for November shipment. In the southeast market was nominal at 12½c. and Waco, 12¼c.

Department of Agriculture estimated cotton production as of November 1 at 14,538,000 bales, 204,000 bales higher the previous month. This compared with the 1960 production of 14,272,000 bales and 10-year 1950-59 average of 13,552,000 bales.

Cottonseed Oil Futures

Sales and prices of prime summer yellow cottonseed oil futures in tankcars (60,000 pounds) on the N. Y. Produce Exchange for the week ended Friday, November 10, follow:

	Sales	High	Low	Close
	Cents per Pound			
Dec.	448	14.17	13.72	14.15 S
March	345	14.12	13.90	14.05 S
May	280	14.16	13.92	14.08 S
July	153	14.17	13.93	14.09 S

Total sales and switches, 1,226 contracts.

Olive—Firm tone prevailed in replacements from Spain. Prompt shipments ranged from $53.50 to $54.50 per 100 kilos, drums, f.o.b. ports for prompt shipment, depending upon quality. The local market also was steady at $2.35 to $2.40 per gallon, exwarehouse, according to quantity.

Peanut — Crude was lower and heavy sales took place at 19½c. per pound, tankcars, f.o.b. mills, prompt shipment. Refined oil was held at 22¾c., tankcars, New York for prompt shipment.

Peanut crop as of November 1 was forecast at 1,763,025,000 pounds by the Department of Agriculture compared with 1960 production of 1,784,116,000 pounds Yield per acre was indicated at 1,244 pounds against 1,265 last year.

Rapeseed—Buying interest lagged and market declined ½c. Tankcars were reduced to 15½c. per pound, New York, prompt delivery and drums ranged from 17½c. to 18½c., spot, according to quantity.

Safflower—Buying interest was more active. Market was unchanged and firm. Industrial grade was held at 19c. per pound, tankcars, New York, prompt delivery and drums ranged from 21c. to 22.30c., as to quantity. Edible was quoted at 22.60c., tankcars and drums from 25.60c. to 26.60c., same basis, as to quantity.

Private estimates place the US safflower acreage in 1961 at 390,000 acres, 25 percent more than in 1960 with 1962 planting expected to be 50 percent higher.

Soybean—Active trading was reported in crude for prompt and forward delivery last week. Market closed slightly higher at 10⅝c. per pound, tankcars, Decatur, unrestricted, prompt shipment. Refined salad was firm at 12.90c., tankcars, New York, prompt delivery.

Iran purchased 1,459 metric tons of soybean oil for prompt and later shipment.

The government report estimated the soybean crop as of November 1 at 700,835,000 bushels compared with the 1960 production of 558,771,000 bushels and 10-year average of 391,162,000 yield per acre was placed at 25.9 bushels against 23.6 last year.

Tung—Slow demand kept this market unsettled and quotations were weak and lower. Firm bids it was indicated could have shaded nominal quotations of 29½c. to 30c. per pound, tankcars, New York for prompt shipment. Drums were lower at 31c. to 31½c., spot, depending upon quantity.

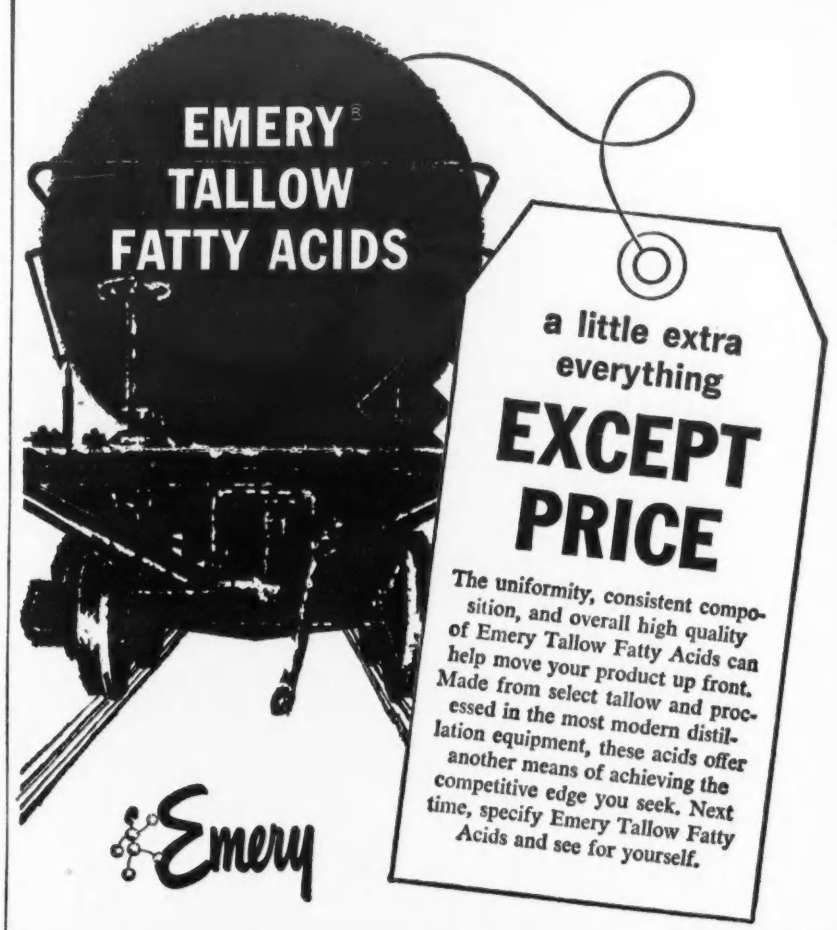
Miscellaneous

Cocoa Butter—Market was stronger, advancing 2c. Stocks on spot ranged from 62c. to 67c. per pound, depending upon quantity.

Copra—Trading was quiet. Prompt shipment was held at $115 per ton, c.i.f. Pacific coast, with bids $2.50 less.

Flaxseed—Trading was extremely dull. Bids were unchanged and offerings dwindled on the heels of recent declines. To-arrive bookings were at a standstill and only a car or two traded daily in the spot

—*Continued on page* **66**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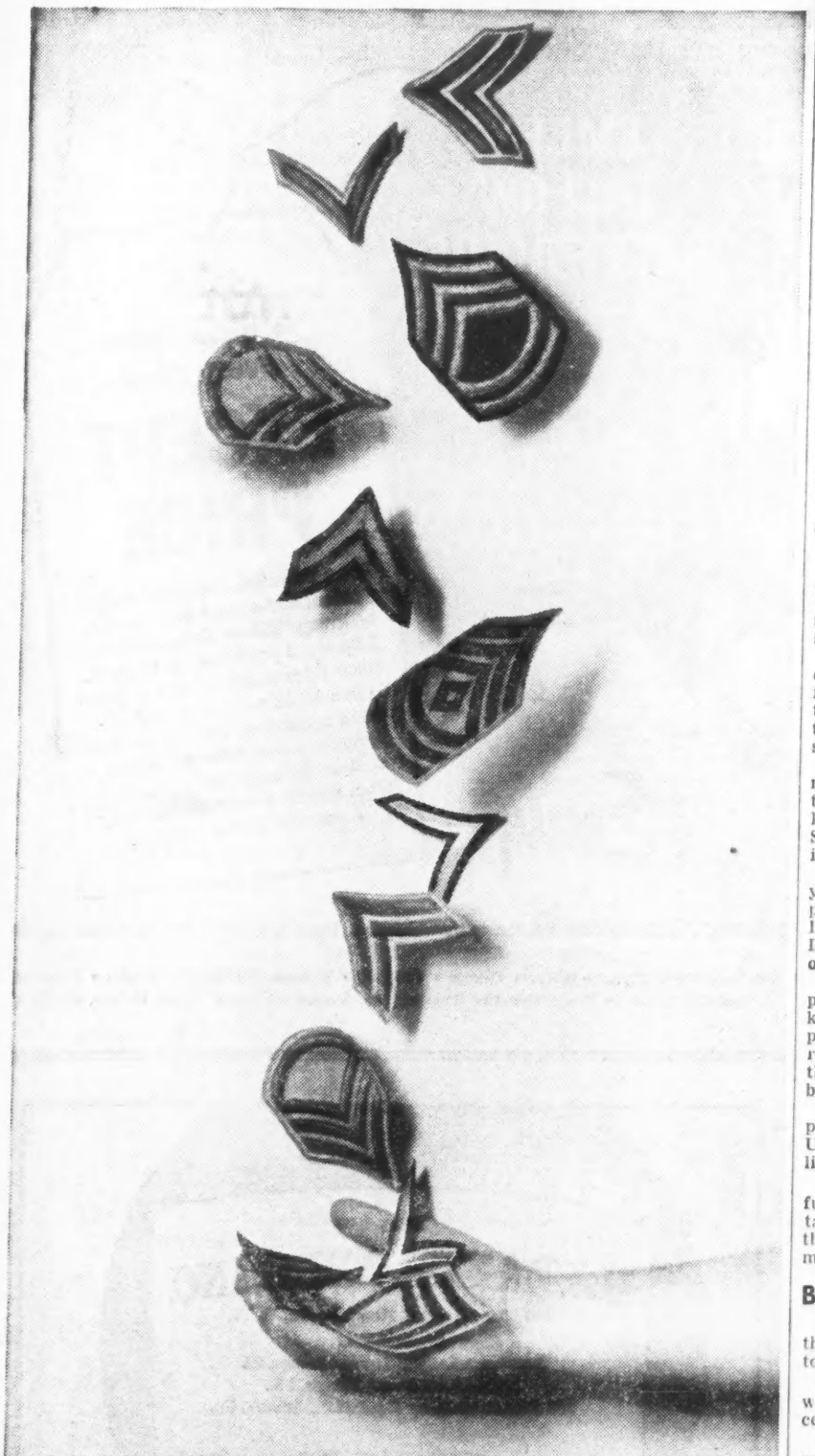

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Coal Chemicals

US Phenol Producers Are Charged With Dumping on European Market

German trade sources are deeply concerned about what they claim is the dumping of phenol into the German and Benelux markets. So concerned, in fact, that it's believed German producers will level dumping charges before a European Common Market meeting and call for protection against the invasion of cheap phenol. Influx of low-priced phenol has been particularly devastating in the last two months, according to the Germans.

Right now phenol is arriving in Germany at 11½ cents a pound, c.i.f. (versus a current US price, for example, of 14¼ cents to 16½ cents a pound depending upon grade). European producers are meeting the price in order to remain competitive and are not at all happy about the situation.

While some foreign trade sources name US producers as the culprits, American observers point out that a good deal of the cheap phenol originates in Europe itself, the result of expanding capacity in such countries as Italy, for instance.

But then exports of US phenol in general have declined sharply this year, giving rise to the opinion in some quarters that the low phenol price may be an attempt by US suppliers to hold on to some share of the European market.

Total US phenol exports in the first nine months of 1961 fell 24 percent from the volume shipped in the same period last year—26.8 million pounds in January-September as against 35.3 million pounds in the same nine months in 1960.

Nearly half of the export phenol this year—12.8 million pounds—reached Dutch ports. About one-half million pounds landed in Germany itself. Italy, Finland, Denmark and Belgium each took amounts of less than a quarter of a million pounds.

From the point of view of US phenol producers, the decline in the export market this year is bad enough alone, but any protective measures initiated by the European Common Market nations against the US would result in even a further backing-up of phenol.

For the past several years phenol exports accounted for about 6 percent of US production. This year that figure is likely to slip to 5 percent.

Should the export situation deteriorate further due to competition from continental producers and/or restrictions, then the export outlet will be narrowed even more next year.

Price Trends

Advanced
None

Reduced
b-Picoline, 30c. a lb. in tanks
g-Picoline, 85c. a lb. in tanks

Comparative Price Indexes
(100=1949 average)

Last week	Prev. week	Last month	Nov. 11, 1960
119.86	119.86	119.86	117.64

For Current Prices See Page 11

Basic Products

Steel production dipped 0.6 percent in the week ended November 4 according to AI&SI.

Output was 2,044,000 net tons for the week as against 2,057,000 tons in the preceding week.

Based on assumed 1961 steel capacity, rate of production for the week ended November 4 was 70.9 percent.

Production for the year through November 4 was 80,765,000 tons, or 7.7 percent behind the 87,504,000 tons turned out in the comparable 44-week period.

Benzene—Ample supplies mark the benzene market picture.

Demand is well sustained from all major end use areas with listed contract price continuing at 31c. a gallon.

Benzene exports in September slumped from August shipments by about 2 million gallons.

Leaving US ports in September were 4,174,383 gallons of benzene valued at $1,460,989, as compared with 6,272,459 gallons in August.

Major shipments were made to:

Italy—1,796,199 gallons valued at $603,763 left Galveston Tariff Commission district. Average price per gallon—33.6c.

Netherlands—762,206 gallons valued at $304,934 left Galveston. Average price per gallon—40c.

UK—761,654 gallons valued at $236,113 left Galveston. Average price per gallon—31c.

Mexico—488,453 gallons valued at $203,343 left Laredo district. Average price per gallon—41.6c.

Brazil—311,466 gallons valued at $95,588 left Galveston. Average price per pound—30.7c.

Total benzene exports through the first nine months of the year were almost double the volume reported for the like period of 1960. In the January-September period 34,126,648 gallons were exported as against 17,238,622 gallons last year.

Naphthalene—By next year Italy will be able to cut dependence upon imported naphthalene by over half when a 25,000-ton-a-year naphthalene unit goes on stream at Bridisi.

Last year Italy's naphthalene consumption was 50,000 tons, of which seventy-five percent went into phthalic anhydride production.

Domestic naphthalene production accounted for about 6,000 to 7,000 tons, while imports totaled 43,046 tons.

Phenol—Japanese sources reveal producers in Japan have reduced the price of synthetic phenol for two nylon pro-145 yen a kg., or about 18.3c. a pound.

Decrease was attributed to the reduced cost of benzene. Because of an increase in imports, it's believed the price will eventually be reduced a further 1.4c. a pound.

Phenol demand by Japanese nylon producers is estimated at about 33,000 tons for 1961 and the same figure for 1962.

Picolines—A major chemical producer has slashed b-picoline price by 35c. a pound and g-picoline by 85c. a pound.

New price for b-picoline effective November 6 is: tankcar or tanktruck, 60c. a pound; carlot or truckload, 65c. a pound, and less carlots, 68½c. a pound.

New schedule for g-pilocine reads: tankcar or tanktruck, 65c. a pound; carlot or truckload, 70c. a pound, and less than carlots, 73½c. a pound.

In cutting the price, the producer hopes to stimulate research and application volume by assuring consumers of a price

Cokeoven Output: September

The following statistics indicate production of selected coal chemicals as reported to the Bureau of Mines by cokeoven plant operators. Benzene statistics do not include motor benzol. All figures are reported in gallons.

	September 1961	September 1960	First Nine Months 1961	First Nine Months 1960
Benzene, nitration	7,369,234	5,795,800	59,526,739	81,350,800
Industrial, pure	2,683,979	1,871,900	23,199,412	26,979,100
Industrial 90 and other	59,697	126,200	1,139,192	1,458,400
Coaltar, crude	56,357,582	43,656,100	449,155,570	551,891,900
Chemical oil crude (tar and acid oil)	2,639,062	1,966,800	20,668,814	22,558,900
Solvent naphtha, crude and refined	386,661	297,300	3,285,835	3,640,400
Toluene, nitration	2,004,175	1,547,700	16,732,116	19,016,100
Industrial, pure	563,174	460,300	3,673,289	4,862,500
Xylene, all grades	581,034	547,700	5,574,143	6,374,200

Coal Chemicals

which because of its economical character will remain fairly stable in the future.

Intermediates

Dihydroxyldiphenol Sulphone — A major producer has announced a new price schedule:

Carlot or t.l., $1 a pound, less carlots, $1.03, freight allowed.

The new posting represents a reduction of 7c. a pound.

Phenolsulfonic Acid—Under a reduction made October 31, the new price schedule reads:

Tankcars, 13½c. a pound, freight allowed, carlots, 15½c. a pound same basis and less carlots, 16½c. a pound, same basis.

Coal Chemicals

Estimated output of coal chemicals recovered from cokeoven operations during the week ended November 4, were as follows:

Ammonia liquor	lbs.	610,670
Ammonium sulfate	lbs.	26,021,613
Benzene	gals.	2,800,708
Coaltar	gals.	14,130,374
Crude chemical oil	gals.	553,229
Solvent naphtha	gals.	92,205
Toluene	gals.	622,381
Xylene	gals.	172,884

Phthalic Anhydride—Sources report that production and producers' inventories are being maintained at a level commensurate with current sales volume.

No increases have been noted in output and production is expected to hold at about the current pace, or slightly below, for the balance of the year.

Phthalic price cut does not appear to have brought added business into camp, one source adds.

Styrene Monomer—Fourth quarter business volume is reported as very good by producers.

Rubber companies are once again heavy-volume consumers as the new car year is now well underway.

Polystyrene is currently in the midst of a seasonal peak as toy manufacturers are cranking out toys for the Christmas rush.

Movement in polystyrene should be well accented until right before the end-of-the year holidays.

Styrene price remains steady at 11.03c. per pound in volume shipments.

Styrene exports in September held at about the preceding month's volume.

Bureau of Census recorded 12,289,947 pounds of styrene outward bound as against 12,119,174 pounds in August.

Value of September's shipments is placed at $1,519,652.

Major shipments were made to:

Netherlands—9,100,484 pounds valued at $1,150,748 left Galveston.

Italy—1,903,776 pounds valued at $218,934 left Galveston.

Mexico—957,791 pounds valued at $105,441.

Exports through September were below volume achieved in the same period last year. Total shipments in the first nine months of 1960 were 102,352,674 pounds as against 112,197,294 pounds in the same period last year.

Chemicals to Cotton

—*Continued from page 5*

benzyl chloride or acrylonitrile, which imparts thermoplastic characteristics to cotton.

This chemically-modified yarn can be permanently crimped or distorted mechanically in the presence of high temperatures. When tension is applied, the yarn lengthens as the crimp is pulled out; when it is removed, the relaxed yarn returns to the crimped state.

As a result of these developments, cotton fabrics with durable loft, warmth and recoverable stretch are headed for commercial development.

Some of the markets for stretch cottons include knit bathing suits, knit dresses, hosiery, foundation garments, sweaters, knit shirts, furniture slipcovers, casket lining and covering materials, bandages, gauzes and sponges, auto seat covers, linings and upholstery, hand luggage covering and meat stockingettes.

Cottons with improved warmth could result in a three-quarter-million-bale increase in cotton consumption through such items as robes, coats, jackets, gloves, suits, skirts, dresses, sweaters, trousers, slacks and blankets.

At the conference, William H. Petersen, of Minnesota Mining & Manufacturing Company, told the group about fluorocarbon fabric finishes. Now reaching the market in quantity, these are the only known chemicals which impart oil repellency, he said.

Acrylic Finish Bonanza

—*Continued from page 5*

flotation and in-place application; foams fire-proofed by additives; and foams made so that all organic material can be burned away, leaving a glass-like structure which can withstand over 5,000 degrees F. and is non-combustible.

• Temporary protective coatings for cars and other products, clear or in colors, which can be washed off with detergent when the car is ready for use. Tradename: "Gift Wrap."

• "Pitt-Glaze," a finishing system for concrete block producing a ceramic tile effect by using a two-coat application of water-thinned resinous filler, topped with two coats of polyurethane clear coating.

Dr. Howard L. Gerhart, director of research and development, said at the lab opening that PPG believes itself to be one of the top three competitors in an industry comprising 1,400 to 1,500 companies.

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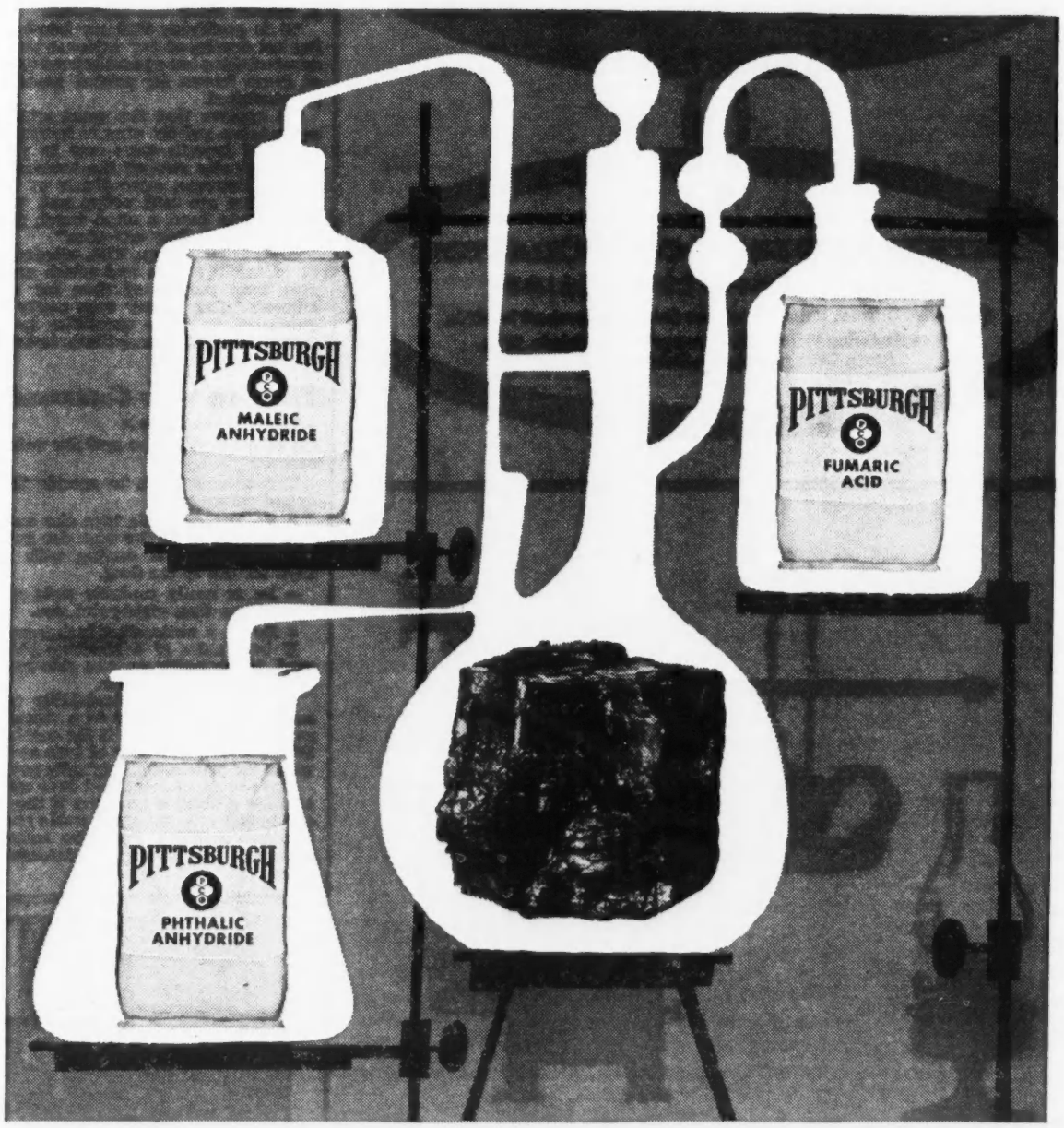

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Methylacetylene Offered By Dow in Large Volume

An industrial gas, claimed to offer operating economies ranging from 15 to 45 percent, has been developed by Dow Chemical Company, Midland, Mich.

The gas is stabilized methylacetylene, a product which the company recently decided to begin marketing in cylinders and tankcar quantities under the tradename, "MAPP."

The material is said to combine the high-energy characteristics of acetylene with the handling and safety features of propane.

Although it is a member of the acetylene family and can be liquefied and handled in regular LPG equipment, it is not, the company emphasizes, a formulated acetylene or propane.

The components of the new gas are methylacetylene, propadiene and related compounds.

Drug Counterfeiting

—Continued from page 7

found handling counterfeits have been involved in court actions to date, the agency reports.

Commenting on the situation as it is now known, FDA Commissioner George P. Larrick made this statement:

"It is gratifying that our latest survey has not developed any evidence that drug counterfeiting has spread beyond the types of drugs known for several years to be counterfeited.

"It appears that the court actions already taken and the ones to be taken as a result of investigations now in progress have virtually stopped the counterfeiting racket. However, some phases of the investigation are still active and we will continue to keep a close watch for any new counterfeiting activities."

In its latest survey, FDA selected drugs of moderately high cost which are used over long periods of time for chronic ailments. The agency says costly drugs purchased in large quantities by retail druggists are the most likely to be counterfeited.

FDA Asks for Comments

—Continued from page 3

ing of medical advice and for veterinary drugs.

The agency plans to specify that required information:

- Be in reasonable type size and location, as related to the type size and location of statements dealing with indications for use of the drug.
- Be in easily readable style of type, of not less than eight-point size.
- Be on a contrasting background.

If both sides of a brochure sheet are used, the printing on one side must not be visible from the other.

The type size and readability requirements would not apply to a reprint of a medical journal article if the reprint is in the same size and style of type as that in which the article was originally published.

The commissioner would have authority to allow a smaller type size if the use of eight-point type is impracticable and if alternative printing would be sufficiently readable to accomplish the intended purpose.

CANADIAN ASS'N PRESIDENT: A. Robins, president of Cartier Chemical Company, Ltd., Montreal, who has been elected president of the Canadian Manufacturers of Chemical Specialties Association for the coming year.

Citric Acid Being Used In Boiler-Cleaning Process

Chas. Pfizer & Co., New York, has developed a new boiler-cleaning process, using ammoniated citric acid, which is said to offer the advantages of superior results in reduced cleaning time and built-in resistance to re-rusting after cleaning.

The process removes magnetic and copper deposits by dissolving them in ammoniated citric acid. If left untreated, such deposits can reduce heat exchange efficiency and cause operational failures.

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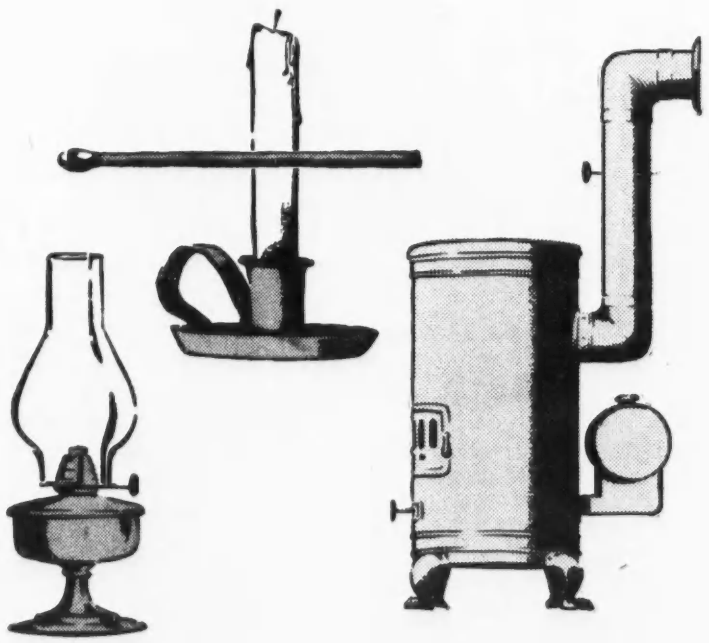

PUZZLE
??????????????????
You're lost in the Yukon, it's freezing cold and you've got one match. You find a trapper's cabin; inside there's one candle, an oil lamp and a stove. Which do you light first?
??????????????????

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Naphthalene • Creosote
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Hazardous Label Law: Its Two Needs

—Continued from page 3

would not be hazardous in the range of 500 milligrams to five grams, Mr. Hull declares:

"In our opinion the federal hazardous substances labeling act was not intended by congress to become a licensing act and to require that a manufacturer must clear his product or prove the 'innocence' of his product before he could market and sell it.

"We believe it is an undue extension of FDA's authority to specify that certain substances are 'prima facie' hazardous substances when in fact they are not.

Statute Should Indicate Hazards

"If all substances up to a range of five grams are found hazardous this should be spelled out in the statute itself or by regulation under section 3(a) which provides for a hearing and the presentation of evidence upon which the findings are based."

Another place in the regulations at which Mr. Hull thinks FDA has gone astray is in holding that diethylene glycol and mixtures of 10 percent or more are "hazardous" because of their toxicity "and the frequency of their involvement in accidental ingestion."

Noting that the regulation bases this finding on "human experience as reported in the scientific literature and to the Poison Control Centers and the National Clearing House for Poison Control Centers," Mr. Hull says.

"We are not aware of any human experience which would justify this classification. It should be pointed out that ethylene glycol base antifreezes contain only an insignificant amount of diethylene glycol. The common use of diethylene glycol is in the automotive field.

No Known Ingestion

"Thus, windshield de-icers and certain types of brake fluids contain significant amounts. We know of no instance of ingestion of a windshield de-icing fluid containing diethylene glycol.

"A summary of records at the National Clearing House for Poison Control Centers shows a total of fifteen ingestions of all types of brake fluids for 1959 and 1960.

"Of these fifteen cases, only one appeared to have caused any undesirable symptoms; the report says, 'Telephone Inquiry. Child vomited, but no signs of further trouble, parents did not call back.'

"Since the brake fluid was not identified, it is not shown that diethylene glycol was involved.

"Thus, we find nothing in the record, either in frequency or severity of injury or illness which would justify such classification of diethylene glycol on the basis of human experience."

Mr. Hull also raps the continued references in the regulations to "purchases" of hazardous substances, insisting that the law was intended to alert the handler or user to the hazards of the product and that there is nothing in the legislative history or the law itself that gives any indication that the precautionary information must be so displayed as to be visible to the purchaser at the time of purchase.

He points out that the hazard of the product is not normally present on the shelf but arises when the product is used or stored after purchase.

Objections Cited by Mr. Hull

Other objectional features of the regulations pointed to by Mr. Hull are:

- The testing methods outlined because the regulations leave no room for alternative test methods that give equally reliable results.
- The broad reach of the term "accompanying literature" because it includes advertising display material.
- FDA's interpretation of "substantial personal injury or illness."
- FDA's insistence that the signal word, the statement of the principal hazard and instructions to read carefully any cautionary information be placed on the main panel of the label.

Of the latter, Mr. Hull fears that if part of the precautionary statement appears on the main panel and part on the side panel, there is a danger that the user will pay special attention only to that part of the abbreviated precautionary message on the face panel and give only passing attention to the balance of the precautionary text on another part of the label.

He suggests that the following statement on the main panel would satisfy the intent of the law: "See precautionary statement on (side) (back) panel."

See page 462 — 1962 Chemical Materials Catalog
See page 63 — 1962 Chemical Week Buyers 'ssue

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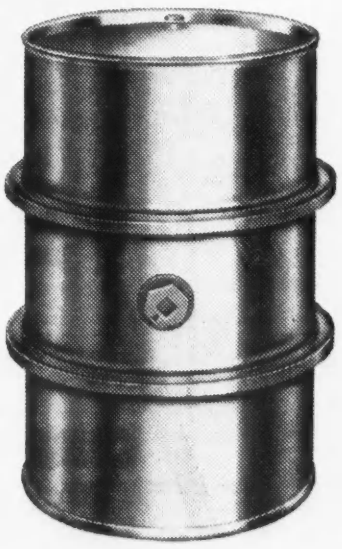

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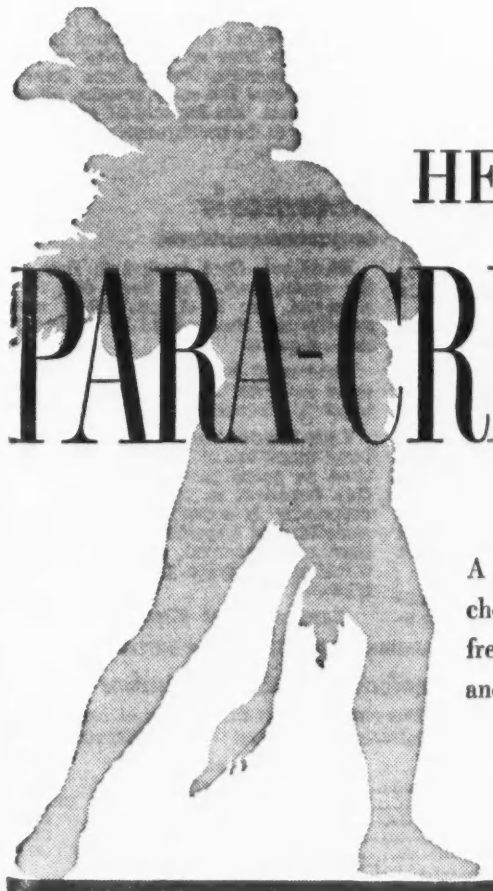

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Alpco 16	Black-Brown	188	48	112
Alpco 20	Dark Amber	186	50	105
Alpco 400	Amber	181	54	100
Alpco 431	Light Amber	183	46	112
Alpco 434	Yellow Amber	185	41	120
Alpco PX-100	Black-Brown	187	42	113
Alpco AX-200	Brown	187	48	141

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Drugs, Fine Chemicals

The technical grade of sodium gluconate, which is used primarily in bottle washing, has just been reduced 4½ cents, to 29½ cents a pound in a car- or truckload of 100-pound bags. The change, reportedly made possible by production economies, follows a 75 cents a pound decline in calcium d-saccharate, posted by the same manufacturer, last fortnight. Going up on November 15—to round up the current price situation—are purified lead acetate crystals and potassium acetate. Under new schedules, the former will be quoted at 37½ cents a pound, the latter at 33 cents a pound, up 2 cents and 3 cents a pound, respectively.

Price Trends

Advanced
None

Reduced
Sodium gluconate, tech., bgs., 4½c. per lb

Comparative Price Indexes
(100=1949 average)

Last week	Prev. week	Last month	Nov. 11, 1960
58.89	58.89	58.82	59.28

For Current Prices See Page 11

Exports of drugs and fine chemicals in September ran into considerable volume, with sulfa drugs and streptomycin shipments far exceeding those of August. India, which has been a major customer for US-manufactured strep since the beginning of the year, purchased close to 5 million grams of the antibiotic and more than 5,000 pounds of sulfas.

Vietnam was also a major market for US drugs in September. A little of practically everything and a lot of a few things were shipped there. Notable were the country's purchases of aspirin, sulfathiazole, prednisone, vitamin B_{12}, streptomycin and DHS.

Fall and the advent of cooler weather has spurred requirements for such of the winter-market items as acetophenetidin, aspirin, caffeine, vitamins—especially vitamin C—and antibiotics. Supplies of these materials are adequate and no shortages are likely to be encountered immediately.

Ascorbic Acid—Off slightly from August, exports of ascorbic acid were 120,581 pounds in September. The entire quantity, according to Commerce department reckoning, was valued at $294,215.

Major buyers were Canada, 35,261 pounds at $94,980; Brazil, 24,891 pounds at $73,266 and Switzerland, 31,305 pounds at $44,020.

Coupled with steady foreign inquiry, domestic requirements this fall have boosted sales volume appreciably. Low prices, established by several reductions in the last part of the summer, are expected to continue to spur interest in the vitamin on the part of pharmaceutical and food manufacturers.

Several new cold remedies, incorporating ascorbic acid, have already been introduced this fall, for example, and in light of the favorable publicity given the vitamin as a cold-fighter, sales of "C" tablets will likely increase also.

Aspirin—Patients with rheumatic fever who have no significant heart murmurs should be treated with aspirin, according to results of a study made in a Boston children's hospital and at Harvard Medical School.

Purpose of the study was to provide a basis for choosing aspirin or one of the adrenocortical steroids to treat rheumatic fever and rheumatic carditis.

It was concluded that aspirin is the "drug of choice" for patients without significant heart murmurs, whose prognosis is termed excellent if no rheumatic fever attacks recur. Aspirin is preferred, the investigators state, due to the "risk of undesirable hormonal effects that accompanies steroid therapy."

The study found that from one-half to two-thirds of patients with "slight" rheumatic heart disease lost all significant murmurs after taking aspirin for a period of a few months to a year following onset of the attack.

Cortisone—September exports of cortisone were valued at $169,667, the Commerce department reports. Destinations of major shipments: Bermuda $79,800; Union of South Africa $13,395, and the United Kingdom, $9,281.

Exports of hydrocortisone the same month were worth $218,429. Large shipments went to: West Germany $93,000; Japan $59,750; Canada $28,361, and the Netherlands $16,775.

Prices for both steroids are quoted at 85c. a gram for 5-kilo lots and at 90c. a gram for smaller quantities. This schedule was established in late summer, following a steady downtrend.

Sodium Gluconate—Sodium gluconate, technical, has been reduced, with the new schedule established at 29½c. a pound in carload quantities; and at 31½c. a pound for a single 100-pound bag.

The producer says that production economies permitted the reduction. Sodium gluconate is used primarily in bottle washing

Sulfa Drugs—Exports of sulfa drugs rose from 53,321 pounds in August to 83,955 pounds in September. The entire quantity was valued at $658,349. Among the larger buyers were Switzerland, India, Vietnam, and Canada.

As broken down by the Commerce department, exports represented shipments of the following sulfas: sulfadiazine 292 pounds at $3,305; sulfathiazole $28,296 pounds at $80,045, and drugs in the basket category, 55,367 pounds at $575,000.

Currently, domestic inquiry is picking up and coupled with continued good requirements from abroad, sales volume is very respectable. Prices here have not been changed for many months, although it is known that imports of some of the sulfa drugs do exert pressures on domestic markets.

Botanicals

Bloodroot—Spot market is firm, with the quote, f.o.b. New York, 80c. to 85c. a pound, the level established several months ago. Stocks held by dealers here are adequate.

Goldenseal Root—Unchanged, the spot price is $2.90 to $3 a pound. Moderate inquiry, adequate stocks are noted.

Lady Slipper Root—Although relatively large quantities of lady slipper root were used in years past, today's market for this botanical is small. Some material reportedly is exported, however. Being something of a specialty as far as dealers here are concerned, the root commands a rather high price. Current quote: $3.50 a pound.

Mandrake Root—Today's prices range

Drugs and Fine Chemical Exports: September

Exports of selected drugs and fine chemicals for the months of August and September, 1961, as reported by the Bureau of Census, were as follows:

	September	*August*
Analgesics and antipyretics ..... lbs.	92,839	72,559
Antibiotics bulk & dosage forms, n.e.c. ..... gms.	18,802,599	21,331,420
Ascorbic acid ..... lbs.	120,581	142,342
Aspirin ..... lbs.	74,809	101,832
B-Complex (excluding B_1 and B_{12}) ..... lbs.	34,944	33,926
Bacitracin 100-million-units	1,788	8,965
Dihydrostreptomycin, bulk ..... gms.	2,975,949	2,237,162
Pectin and preparations ..... lbs.	39,774	65,996
Penicillin, bulk ..... million-units	10,729,852	10,800,504
Streptomycin, all forms ..... gms.	8,775,226	2,664,537
Sulfa Drugs ..... gms.	83,955	53,321
Thiamine ..... lbs.	1,879	2,480
Thiamin A bulk, medicinal ..... lbs.	17,596	16,294
Vitamins, bulk, n.e.c.* ..... lbs.	55,610	69,359

* Not elsewhere classified by the Census bureau.

from 42c. to 44c. a pound. Routine demand, normal stock positions are reported by dealers.

Pink Root—One of the less plentiful items, pink root is bringing $2.50 a pound on spot. Previous price was $2.25.

Senega Root—Prices are higher at origin than they had been earlier this year, causing a boost in the spot quote, which last week was called $2.65 a pound. This represented an advance of about 25c. a pound, and brings the schedule closer to the first-of-the-year range of $2.95 to $3 a pound.

Serpentaria Root—Serpentaria root, which is also known as Virginia snakeroot, has been scarce this season and spot prices reflect this fact. Range is $7 to $7.50 a pound.

Wahoo Root Bark—There is not much demand for wahoo root bark today, and prices consequently are determined by the extent of stocks. Current quote, reflecting moderate supplies, is $2.10 a pound.

Wild Ginger Root—Wild ginger, also known as Canada snakeroot, is selling today at about 60c. a pound.

Drug & Fine Chemical Briefs

COLD REMEDY: "Salphremine," a new combination drug for combating the common cold and associated disorders, has just been introduced by Vitamix Pharmaceuticals, Inc., Philadelphia. The drug contains salicylamide, acetophenetidin, vitamin C, phenylephrine hydrochloride, phenyltoloxamine dihydrogen citrate and caffeine.

NEW ANTIBIOTIC: Discovery of "Pactamycin," a new antibiotic that has been found highly active against human cancer cells in laboratory tests and a variety of tumors in mice and hamsters, is reported by the Upjohn Company, Kalamazoo, Mich. Research was supported in part by a contract with the Cancer Chemotherapy National Service Center.

O'SEAS CONSTRUCTION: Parke, Davis & Co., Detriot, Mich., is constructing a $850,000 combined manufacturing laboratory and sales branch in Karachi, Pakistan. The project calls for an administration building and a manufacturing unit in which essentially a complete line of the firm's pharmaceutical products will be produced.

TRANQUILIZER STUDY: Nervousness, nausea and dizziness, common side effects of drugs, such as ephedrine, usually used to control asthmatic symptoms, are markedly reduced through combination therapy with the tranquilizer "Atarax" (hydroxyzine hydrochloride), according to findings in a recent clinical study. "Atarax" is marketed by J. B. Roerig & Co., a division of Chas Pfizer & Co., New York.

Ind. Standard's Ammonia

—*Continued from page 7*

under construction at Joliet, Ill., will be enlarged. Originally planned for 15,000 tons, this terminal will be increased to 25,000 tons.

Two barges, each with a capacity of 1,700 tons of anhydrous ammonia, will be placed in service to connect these terminals with producing plants.

Also in the expansion move, Schrock Bros., Tuloma's wholly-owned subsidiary, will be enlarged. Schrock now markets anhydrous ammonia and other fertilizers through its own retail outlets in the middle west. In addition, it manufactures and services equipment that directly applies anhydrous ammonia into the soil.

Tuloma is reportedly the nation's fourth largest marketer of LP-Gas. With the recent transfer of nitrogen products marketing from American Oil, Tuloma will become a leading seller of anhydrous ammonia. Present ammonia marketing activities center in the corn belt where products are supplied from the Calumet Nitrogen Products plant at Whiting, Ind.

War Fibers

—*Continued from page 3*

the softening point of the fiber and keeps it from shrinking in water.

Some possible uses for the fibers aside from CBR protection: superior supersonic parachutes and personnel armor for ballistic protection.

The QM report tempers its excitement over Russian fiber developments, however. "The best estimates place man-made fiber production years behind that of the United States.

"Even those man-made fibers that for years have been produced here in large quantities are not yet readily available to the Russian consumer."

Further, it points out that the Soviets appear to be duplicating US efforts in synthetic fiber research in most cases.

Benzenoid Products

—*Continued from page 7*

changes which have occurred since the tariff act was enacted in 1930.

- To eliminate anomalies and illogical results in the classification of articles.
- To simplify the determination and application of tariff classifications.

The commission says of the benzenoid products proposals that the suggestions "do not in any sense relate to the tariff classification of these products and would significantly change the protective incidence of the rates of duty applying to these products.

"The suggestions, therefore, treat with matters beyond the scope of the statutory directive pursuant to which the tariff classification study was undertaken."

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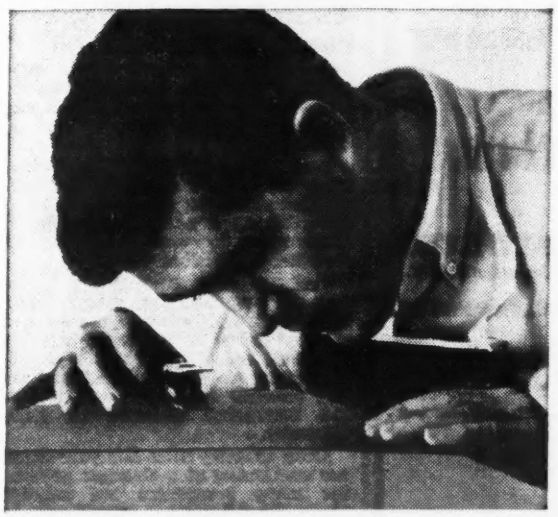

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OPD Reports From Europe

Chemical Expansions' New Trends

—Continued from page 7

following roughly the same target capacities, but on a twelve-year time-scale instead of a ten-year program.

But a modern chemical industry cannot simply put on the capital spending brakes, the German industry experts note.

They say the pace of technical progress is a "continuing compulsion" to investment in the world chemical industry and, to maintain its competitive position in the world market, chemical companies can never afford to slacken their capital spending.

Within the German industry, there is a strong swing this year to "rationalization," with second emphasis on the simple expansion of capacity. Rationalization is the overall term used in Europe to cover all activities aimed at increasing the efficiency of company operations and reducing basic costs.

With continual downward pressure on chemical prices and steady increases in costs, particularly wages in recent months, the German industry is concentrating on cost-saving investment this year.

Capacity Growth a Major Factor

Spending in several recent years in Germany has been dominated by the desire to build larger production capacity to handle rising domestic and export demand.

Last year plastics and petrochemicals were the main areas of investment with plastics accounting for $100 million of the total. Rising sales and demand for synthetic fibers has also meant large expansion budgets in that field.

Verband des Chemischen Industries notes the contrast last year between the drug industry, where investments fell slightly below 1959 despite strongly rising sales, and certain types of proprietary and cosmetic products where capacity was strongly expanded as a reflection of the increasing standard of living in Germany.

Drug industry sales this year apparently are continuing at a stronger growth rate, for many companies are substantially above the 4-5 percent overall rate for the German chemical industry.

The basic drug firm Schering notes its volume is up about 15 percent in the first nine months despite price decreases and the revaluation of the Deutsch Mark.

Asta-Werke, a smaller drug firm, reports its volume so far this year is running 8 percent ahead of 1960. Asta is in the midst of a major expansion project and Schering is issuing new shares to raise money for its various expansion projects.

SOCMA Meets Tomorrow

The Synthetic Organic Chemical Manufacturers Association will hold its next meeting tomorrow (November 14) at the Roosevelt hotel, New York. Dr. Crayton K. Black, chairman of the international commercial relations committee, will be the guest speaker. His topic will be: "Battle Lines in Foreign Trade—A Year of Decision."

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Coating Materials

Argentine casein prices drifted upward ½ cent per pound in a market featured by quiet trading and limited supplies from primary market sources. Phthalocyanine pigments are moving well, partly due to better business volume in general, and partly due to heavy buying in anticipation of the price rise that is to become effective later this month. Litharge, mineral orange and red lead pigments are being shipped under new price schedules announced in the previous issue of OPD—½ cent per pound under former schedules. Trading in shellac is routine under a firm price position. Synthetic resin sales are on the upgrade as industrial finishes for automotive enamels and lacquers enjoy an increased demand in line with new car model production. Plasticizers are holding firm under the new lower price levels established in October. A greater demand from plastic sheeting and film manufacturers, as well as from industrial lacquer producers, is noted.

Organic toners of the type used for automotive finishes are moving well from quite abundant supplies under price patterns long in effect. Favorable weather conditions has kept up house painting at a good clip, but this is soon felt likely to slacken, thus cutting back on the demand from the paint industry for zinc pigments. This loss will be more than offset by heavier November demands from the rubber industry.

Price Trends

Advanced

Casein, Argentine, ½c. per lb.

Reduced

None

Comparative Price Indexes

(100=1949 average)

Last week	Prev. week	Last month	Nov. 11, 1960
103.13	103.13	104.69	103.15

For Current Prices See Page 11

Prime Pigments

Litharge — The new price schedule which went into effect November 1 on this material is 12¾c. per pound in carlots and 13¾c. in less-than-carlot quantities. This ½c. per pound reduction in prices, as indicated in the previous issue, was due to lower lead metal prices.

Mineral Orange—As reported in the previous issue, the decline of lead metal by ½c. per pound led to a similar reduction in the price of this pigment. This makes the new price of mineral orange 15½c. per pound in carlots, and 16½c. in less-than-carlot quantities.

Phthalocyanine Pigments — Blue and green phthalocyanine pigments which will undergo some upward price adjustment later this month, are currently enjoying increased buying interest. This is partly due to the fact that the paint business is very considerably better than it had been a few weeks back, and partly due to the fact that certain grades of phthalocyanine colors will advance in price by November 20.

Both industrial and trade sales type products using these pigments are in steadily greater demand. Home decoration has had a spurt with good fall weather, and as the weather gets colder more home painting of interior surfaces will be done, much of which requires latex and emulsion finishes where phthalocyanine alkali stable tints and clean tones are much desired.

Industrial finishes where the non-fading phthalocyanine colors find frequent use in tints and deeper shades is on the upgrade from such industrial outlets as the automotive trade. Just what phthalocyanine colors will advance and what their price structure will be, was detailed in this section of the October 30th issue of OPD.

Red Lead—All grades of this important metal protective primer pigment were reduced in price as of November 1 by ½c. per pound reflecting the drop in metal prices of 50c. per hundredweight. Under the new price schedule, carlot quantities of red lead pigments are listed as follows: 95 percent grade, 13.25c. per pound: 97 percent grade, 13.45c. per pound; and 98 percent grade, 13.60c. per pound. Less than carlot quantities are priced 1c. per pound higher.

Miscellaneous Materials

Casein—The market continues relatively quiet. Offerings are noted as light but perfectly adequate for trade needs. An occasional report mentions a modest improvement in buying interest, but for the most part demand is spotty and lacking aggressiveness.

Information from the Argentine indicates conditions are improved there, and available supplies will be in line with previous producing seasons. Stocks of French and Polish appear cleared and movement is limited to an occasional resale.

Offerings of Australian for Dec.-March shipment are reported at 20c.-21c. The trade feels more volume is available from this source than previously indicated. New Zealand is unchanged at 24c.-25c. Wholesale (min. carlot) best quality 30 Mesh Acid Type Argentine is selling in N.Y. at 19c.-19¾c., mostly at 19½c.

Synthetic Resins

The following preliminary figures issued by the Tariff Commission show production in pounds for August 1961 as compared with production figures for the previous month:

Production

	July	August
Phenolic and other tar acid resins:		
Molding resins	12,484,428	17,823,353
Laminating resins	5,393,554	7,492,361
Protective coating resins, modified, unmodified, except by rosin	1,637,985	1,727,702
Urea and melamine resins:		
Protective coating resins, straight modified	2,805,031	3,624,297
Styrene resins:		
Protective coating resins, straight modified	6,089,155	5,291,032
Vinyl resins:		
Total all types	91,943,286	107,232,991
Alkyd resins for protective coatings:		
Phthalic anhydride types:		
Unmodified	20,953,409	23,057,654
Modified with tar acids, rosin and/or other material except styrene	7,112,909	7,743,093
Polybasic acid types except phthalic:		
Unmodified	677,805	706,558
Modified with tar acids, rosin and/or other material except styrene	831,385	771,106
Rosin modification for protective coating:		
Rosin, rosin esters, unmodified (ester gums):		
Esterfied with glycerol	846,698	1,043,030
Esterfied with other alcohols, pentaerythritol, glycols, etc.	408,143	618,950
Modifications with phenolic and other tar acid resins	1,415,839	1,528,621
Modifications with maleic and fumaric acids	2,132,925	2,283,055
All other modifications	4,524,128	4,553,685
Coumarone-indene and petroleum polymer resins	16,532,933	21,561,934
Miscellaneous plastics and resin materials	21,138,174	25,242,267

Naval Stores

According to the USDA, overall rosin sales were 2,631 drum equivalents compared with 5,526 last week and 2,541 the week before. Sales, f.o.b. plants, prompt, drums WW $11.80-$12.10, WG $11.61-$12, Nancy $11.93, M and below $11.70-$11.75. Tank cars M and below $11.25. Bags WG $11.65, M and below $12.05. Sales export, f.a.s. ports, drums, prompt, WW $12.

Over-all turpentine sales were 34,000 gallons compared with 63,500 gallons last week. Tankcars, f.o.b. plants, prompt 21-9/10c. to 31c., mostly 21-9/10c. to 23c.

Average commercial crude gum price was $30.30 per standard barrel in the week ending 10-28-61, previous week $30.60, year ago $45.10. Loan price this week $26.40. Volume gum delivered this week 14,779 barrels including 11,863 barrels loan, previous week 16,705 barrels including 13,624 barrels loan, year ago 12,900 barrels. Average barrel content: turpentine 9.10 gallons, rosin 297.9 pounds. Gum grading 12 WW, 25 WG, 26 N, 34 M, 3 K and below.

Coating Materials Briefs

MARBON DROPS PRICES: Reductions in the price of "Cycolac" brand ABS plastic, ranging from 10 to 14 percent per pound in truckload quantities, have been effected by Marbon Chemical Division of Borg-Warner Corporation, Washington, W. Va.

The new prices place "Cycolac" brand natural grades at 42 cents per pound,

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Coating Materials

standard and custom colors at 46 cents and metallics at 49 cents. Previous prices for the three categories were 49 cents., 51 cents and 54 cents.

NEW PROPIONATE PLASTIC: Develment of a new "Tenite" propionate formula which combines outstanding flow characteristics with good permanence properties and surface hardness is announced by Eastman Chemical Products, Inc.

The Eastman Kodak Company subsidiary reports that the new formula, designated "Tenite Propionate 325," is the easiest of all "Tenite" propionate formulas to mold, and is particularly advantageous in applications hampered by mold-filling difficulties.

Although it was developed primarily for injection molding, Eastman states that the exceptional flow properties of the new formula make it also suitable for processing by extrusion, blow molding, or the thermoforming of extruded sheet.

Like other "Tenite" propionate formulas, it is available in a crystal-like clear transparent as well as in a wide range of other transparents, and in translucent, opaque, pearlescent, and variegated colors.

NON-IONIC COLOR DISPERSIONS: Hilton-Davis Chemical Company has made available a new line of versatile, nonionic color dispersions for water paint systems.

The new line is called "Super Seatone" and incorporates features most wanted by formulators of water-based paints. The effectiveness of the "Super Seatones" was established in exhaustive tests prior to commercial introduction.

Hilton-Davis is offering "Super Seatones" in toluidine red light, naphthol red light, naphthol red dark, red iron oxide, burnt umber, permanent yellow (lead free), ferrite lemon yellow, phthalocyanine blue (red shade), phthalocyanine green (blue shade) and carbon black.

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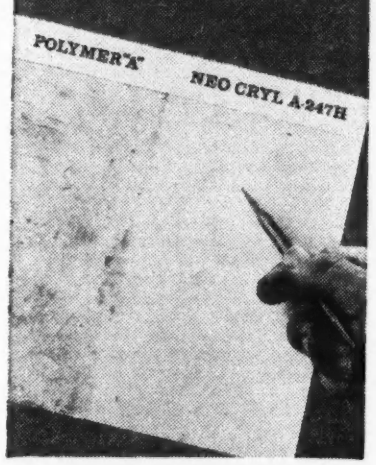

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Obituaries

F. Cecil Baker

F. Cecil Baker, former president of American Potash & Chemical Corporation, Los Angeles, died November 5 in Shaftsbury, Vt. He was seventy-two years old.

Mr. Baker was head of American Potash from 1941 until his retirement in 1945. Before joining the firm he had been manager of the American interests of Consolidated Gold Fields of South Africa, Ltd.

During his career, Mr. Baker was also president of the Fresnillo Company, and a number of other mining concerns.

C. H. B. Rutteman

C. H. B. Rutteman, chairman of Hercules Powder Company, Ltd., since 1956, died in London, England, November 8. He was fifty-one.

Mr. Rutteman joined Hercules in 1927 at the Hague, Netherlands. In 1940, with the outbreak of war, Mr. Rutteman went to England where he served with the Dutch army.

In 1944 he organized Hercules Powder Company, Ltd., and was named managing director. He was elected board-chairman twelve years later.

He held directorship in, among other companies, Nelsons Acetate, Ltd., England, and Resinas Quimicas, Ltda, Portugal.

Earl O. Erlandson, branch manager in Atlanta, Ga., for Archer-Daniels-Midland Company, died November 3 in that city. With ADM since 1954, Mr. Erlandson headed the company's Atlanta regional office for the last four years.

Louis V. Hunter, a senior public relations officer for International Nickel Company, in New York, died November 5 in Clark, N. J. He was forty-nine years old.

Carl C. Mattman, textile technologist and consultant, died November 8 in New York. He was sixty-seven years old. Among Mr. Mattman's clients were such firms as B. F. Goodrich Chemical Company and Virginia-Carolina Chemical Corporation.

Pfizer Signs Papers

—Continued from page 3

Leeming markets the "Ben-Gay" products and Pacquin specializes in toiletries.

The Leeming and Pacquin businesses will be operated on a decentralized basis as wholly-owned subsidiaries of Pfizer. No personnel changes will be made in the operations.

Edward B. Austin, now board chairman and president of the Leeming and Pacquin companies, will continue as board chairman and president of the subsidiaries. Thomas M. Cooney, formerly assistant to the president of Pfizer, will join the subsidiaries as executive vice president.

Leeming and Pacquin maintain headquarters in New York and a production plant in Parsippany, N.J. Leeming was established in 1881, Pacquin in 1923.

Rosin Market Talk Correction

In reporting on the rosin outlook talk made at the annual naval stores breakfast, OPD in its previous issue errroneously quoted H. L. Meyer of Chematar Pine Products Corporation as predicting a 25,000-ton rise in US tall oil production next year. Actually, Mr. Meyer forecast an increase of 25,000 drums.

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Essential Oils, Aromatics

Lemongrass continues firm and scarce on spot with no indications when the supply situation will ease. Several dealers are no longer offering material and those who are, are asking a high price for it. Sandalwood continues at its previous price, but the market is generally easier. No spot price changes have been noted, but reductions are anticipated. Bourbon vanilla beans weakened slightly and Mexican beans advanced. This year's crop of Bourbon material is said to be extra large while this year's crop of Mexican material is quite small.

Bourbon geranium continues weak but no further reduction in price has been noted. Patchouli continues quite firm, according to reports from essential oil dealers here in the New York area.

Increased consumption of soap chemicals and other raw materials such as soap perfumes, is anticipated in Colombia, according to the US Department of Commerce.

The National Soap Manufacturers Association, in cooperation with the Ministeries of Education and Public Health, is carrying on a program of talks and demonstrations on the use of soap in bathing and laundering for disease prevention.

Assistance in the program is being received from the National Renderers' Association of the United States under PL480, Section 104 (a) project.

The Department reports that obtaining tallow supplies is a key problem in increasing soap production.

Price Trends

Advanced
None

Reduced
Vanilla beans, Bourbon, 20c. per lb.

Comparative Price Indexes
(100=1949 average)

Last week	Prev. week	Last month	Nov. 11, 1960
142.46	142.46	142.95	145.34

For Current Prices See Page 11

Essential Oils

Bergamot — Annual production in Italy is some 397,000 pounds, according to figures from the US Department of Commerce. Italy is the world's largest producer of this oil.

Bergamot is used in many types of perfume formulations, especially those for face and hair lotions. Other outlets are for flavoring beverages and foods.

Bergamot was officially cleared, by notice in the Federal Register, for use in the US in food products and toilet preparations.

Bois de Rose—Material continues to move at a moderate-to-good rate according to reports from essential oil dealers here in the New York area. Brazilian material continues at $2.05 per pound and Peruvian material continues at $1.65 per pound.

Oil of bois de rose is important for its high linalool content (a rose type) which, in turn, is widely used in perfume formulations for soap and a very large number of odor types. And, according to the Department of Commerce, the Brazilian government and Brazilian exporters have consistently endeavored to increase shipments; however, Peru entered the US market in 1950 and has since been strengthening its domination of the field by dint of lower prices and ability to supply the major portion of requirements. This competition is shown by the following US import figures (in pounds):

	1960	1959	1958	1956
Brazil	178,607	373,978	75,212	344,206
Peru	343,297	354,033	371,266	382,055

Commerce Department reports that because linalool is now being produced commercially in the US synthetically from pine, it is questionable whether larger quantities of oil bois de rose can be absorbed as a raw material for making linalool.

Use of the natural product in soaps and other perfume formulas is not expected to increase. And as long as the Peruvian price is lower, the Brazilian product is not likely to make headway, says the Department.

Gloves—Material is reported to be moving in good volume with prices firm.

Clove leaf oil continues at $1.10 per pound and clove bud oil continues at $2.55 per pound.

Poor crops between 1947 and 1949 caused a heavy drain on stocks and started an upward movement in prices which became dramatic during the Korean boom, according to the Food and Agriculture Organization of the United Nations.

In June, 1950, stocks had fallen to a record low of 2.6 thousand tons and 1951 and 1952 saw two more extremely poor harvests. The 1953 crop was the largest since 1937 and by December the price had fallen again.

From 1950 to 1953, the Clove Growers Association of Zanzibar was altogether out of the market as a stockholder. It was only after 1954 that the Association could again come into action as a stabilizing influence, according to the UN report.

Once world prices had fallen below the Association's minimum, the Association was able to rebuild its socks. Excess production in 1955 and 1957 was taken over and placed in reserve while in 1956 and 1958 the Association was able to offer considerable quantities over and above the crops of those years.

This policy smoothed the flow of exports in the face of fluctuations in production. From 1954 to 1958 the Association's buying price remained above the world market price. It was reduced only in 1959.

Madagascar, the other important source of cloves, is far less dependent on this particular crop than Zanzibar, and has no official stockholding policy. Madagascar clove prices in fact moved exactly in line with those in Zanzibar until 1954 when Madagascar prices fell much below the Zanzibar prices on world markets. In 1957 the Madagascar authorities established a special *Caisse de Stabilization* for cloves.

The organization is still in its initial stage but it is limited in its powers to support prices at present by the absence of any suitable warehouse in which it could store cloves in a year of excess production, according to the UN report.

Pepper Imports

The following figures are in thousands of pounds.

	1959	1960	1961
January	2,904	2,524	2,089
February	2,013	8,173	1,929
March	2,687	3,870	2,961
April	4,626	5,890	2,954
May	3,469	2,364	3,316
June	2,341	2,188	3,546
July	2,387	1,389	2,757
August	2,330	2,127	2,400
September	3,339	2,005	*2,085
October	3,930	1,456	*2,240
Total	30,026	31,986	*26,250

* Estimate.

Seeds and Spices

Anise Seed—Mexican material has advanced from 32c. per pound to 33c. per pound. Turkish has advanced from 30c. per pound to 32c.

Cinnamon — Ceylon No. 0000 material has dropped from 63c. per pound to 62c. per pound. The No. 2 grade continues at 55c. per pound.

Ginger—All grades are quite firm, according to dealers. Sierra Leone material has advanced from 33c. per pound to 36c. Jamaican No. 3 material has advanced from 33c. per pound to 40c., and Nigerian split material has advanced from 26c. per pound to 29c.

Marjoram—French material continues firm at 60c. per pound.

Pepper—Slight declines were noted. Malabar and Lampong black dropped from 40c. per pound to 39½c.; Brazilian white dropped from 51c. per pound to 50c.; Muntok white dropped from 52c. per pound to 51½c., an Brazilian black remained at 37½c. per pound.

Vanilla Beans—Users are showing a little more interest in buying nowadays than they have been during recent months, according to reports from vanilla bean dealers.

The price of Bourbon material is now about the lowest it has gone since 1953. It recently dropped to a range of $6.40 to $6.65 per pound.

Heavier buying of Bourbon material is attributed to speculation that the market

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Essential Oils

will start to firm in the near future. There is some feeling that the Malagasay Republic will tighten controls thereby raising both source and spot prices.

It is reported that this year's crop of Bourbon beans is a large one.

This year's crop of Mexican material, however, is small and at the same time Bourbon material has been dropping in price. Mexican has been rising.

Cut beans are now selling for prices ranging between $7.50 and $7.80 per pound while whole beans are now selling for prices ranging between $7.80 tnd $8.10 per pound.

Essential Oils Briefs

FRITZSCHE OFFERS CITRUS: Fritzsche Brothers, Inc., New York, is now offering Citrus Valley Brand oil of lemon, USP, and oil of orange, USP.

The essential oil house announced that, following the resignation of its distributorship for a California packer, it has secured from other sources a continuous supply of citrus oils. These new oils will be packed in epoxy-lined drums.

Dodge & Olcott, Inc., New York, will also offer Citrus Valley Brand orange and lemon oils.

NEW COSMETIC DEPT.: Stanley S. Schoenmann, Inc., 30 Broad Street, New York, has recently established a cosmetic raw material and pharmaceutical department. This import-export firm deals in essential oils, aromatic chemicals and fruit products.

VANILLIN OUTPUT SLATED: A/S Borregaard, a major Norwegian diversified company, will produce vanillin as a by-product of waste sulfite liquid from cellulose production. Initial vanillin output of the firm will be 200 tons a year.

Chemical Trade Record

—*Continued from page 4*

ports were at an annual rate of $19.832 million, about 3 percent higher than a year ago.

September imports of general merchandise totaled $1,249 million, slightly higher than the August total. For the nine-month period, imports were at an annual rate of $14.211 million, about 5 percent lower than last year.

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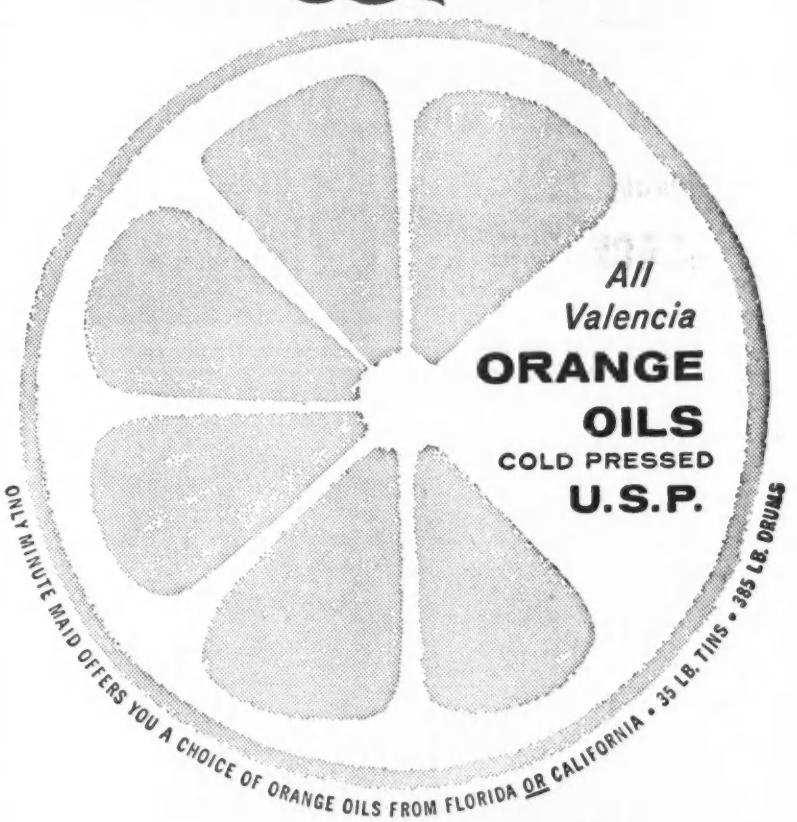
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Oils, Fats and Waxes

—Continued from page 53

market. Bulk of arrivals applied on previous contracts. No. 1 flaxseed was bid $3.44 per bushel, spot and to-arrive, basis Minneapolis.

Flaxseed crop as of November 1 was estimated at 21,420,000 bushels compared with 1960 production of 30,409,000 bushels. Yield per acre was indicated at 7.8 bushels against 9.1 last year.

Fats and Greases

Greases—Buying interest was restricted to actual needs. Prices were without change and fairly steady. Choice white ranged from 7⅜c. to 7½c. per pound, tankcars, delivered and yellow, 5c., same basis, as to quality.

Lard—Market was moved within a narrow range closing without change. Cash lard was quoted at 8¼c. per pound, drums, Chicago.

Tallow—Trading was light and spotty. Prices were without change and fairly steady. Offerings were not liberal. Bleachable fancy was held at 5½c. tankcars, delivered: prime 5⅜c.; fancy guaranteed fancy 5⅞c.; special 5¼c. and No. 1, 5c., same basis. Guaranteed fancy was sold at 6⅛c., bulk, f.o.b. steamer and 7⅛c., drums, f.a.s.

Cake and Meal

Cottonseed Meal—Good demand and light offerings strengthened the market. Prices were boosted $3 to $4 per ton. Meal 41 percent was advanced to $63 per ton sacked, in the Mississippi Valley and $68, Georgia-Carolina for November shipment.

Linseed Meal—This market was firm, reflecting consistent demand and curtailed production. Most Minneapolis crushers were not operating on flaxseed. Market improvement occurred in formula feed business, mixers pressing for quick shipment on old balances. Extracted meal, 34 percent protein, was quoted at $56.50 a ton, bulk, in carlots, f.o.b. Minneapolis, November delivery; $56, December forward. Old process expeller meal dropped $1 to $61.50, Novmber; $61, December; and $61.50, January-March.

Soybean Meal—Extreme tightness in supplies of Illinois meal kept this market strong, but discounts of $3 to $4 were offered for December. Spot prices advance $3. Principal demand came from eastern trunk line for cattle feed and export. Supplies were more plentiful in the northwest, some prices down $1 a ton. Hog and chicken feed business picked up sharply in Minnesota and Wisconsin and some improvement was noted in cattle feed. Meal, 44 percent protein, was higher at $65 per ton, unrestricted bulk, Decatur, immediate delivery and $63.50 for this week delivery.

Waxes, Vegetable

The situation has tightened in yellow carnauba wax and prices advanced sharply 4c. to 6c. per pound for spot delivery according to seller and quantity. Offers of this grade for nearby shipment from Brazil were reported very light and held at higher prices. No. 1 Ceara yellow were quoted at 88c. to 90c. per pound, spot, as to quantity and Parnahyba 90c. to 94c., same basis. While yellows were stronger, fatty grades were unchanged and in slow demand. Consumers continued to operate in a hand to mouth manner, with fairly large lots moving at concessions. No. 3 Ceara crude was offered at 55c. to 57c. per pound, spot, depending upon quantity and Parnahyba was available at 2c. higher.

Fisons Cutting Back

—Continued from page 7

Ammonia Company to produce 150,000 tons of ammonia yearly in a plant costing $11.2 million. This ammonia would then be piped to a wholly-owned Fisons plant for production of ammonium nitrate and other nitrogenous fertilizers.

Export markets in fertilizer are limited, Fisons says, and it is now expanding some of its ventures abroad and studying new ones.

Current projects include expansion in India and sale of new products in the U.S. Under study is a possible attack on the potential fertilizer markets of South America.

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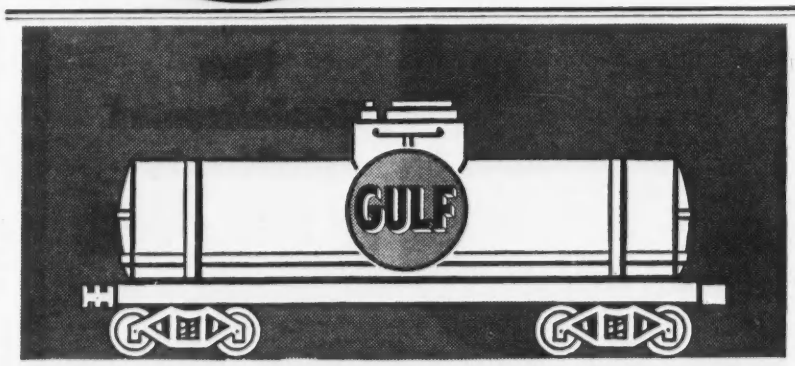

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Petroleum Derivatives

Benzene exports for the first nine months of the year virtually doubled the amount shipped out of the country during the comparable period in 1960. The export figures themselves reflect the changing benzene situation—from the time when supplies were such that producers were having to cut corners to meet the demand put upon them, to the current free-and-easy position that benzene commands in the domestic market. The trend is an encouraging one to most observers. Others, however, are frankly concerned with the number of new producers jumping on the benzene bandwagon. The possible oversupply consequent upon this may have a detrimental effect on the industry, they feel.

Toluene is selling at 25 cents a gallon (½ cent below the list price) along the Atlantic seaboard from Maine to Miami. The localized situation, which began in the Newark, N. J. area three weeks ago, is not expected to spread to the midwest, with the exception of the metropolitan Chicago area where toluene has been selling at 25 cents for the past six months.

From a purely economic viewpoint the ½ cent localized price reduction is of dubious advantage to the industry, according to one observer. It comes at a time when toluene is, if anything, a little snug in the domestic market.

Price Trends

Advanced
None

Reduced
None

Comparative Price Indexes
(100=1949 average)

Last week	Prev. week	Last month	Nov. 11, 1960
104.13	104.13	104.13	103.74

For Current Prices See Page 11

Aliphatics

Mineral Spirits — What with the warm weather continuing into the fall, and heavy painting schedules in full swing, the paint industry should get a shot in the arm after its summer doldrums. One consequence of this will be the healthy demand for mineral spirits.

No foreseeable shortage of either regular or odorless spirits could develop, however. This is the feeling of virtually all producers concerned.

Prices remain stable. No change is looked for in the immediate future.

VM&P Naphtha — Demand is reported well-sustained for this solvent. The possible upsurge in the paint industry may have a salutary effect on sales, and even better its present condition.

Trade sources report it as moving in routine channels. The long-established prices remain fixed at 19c. a gallon in tankcar lots in the N.Y.-N.J. area, 13.875c. a gallon, same basis, in Group 3, and 15.5c. a gallon, same basis, at Houston, Texas.

Aromatics

Benzene—Nothing new on the benzene situation other than what has been reported in this column over the past two weeks. Some sources remain a little tight-lipped. No one is willing to make any dire predictions.

As things stand, the supply/demand balance is quite firm. Any trepidations as to what in the near future may stack up as an oversupply problem, do not appear warranted at the moment. Everyone is getting all they want, and promptly.

Exports of benzene in September fell off considerably from the August totals by about 2 million gallons, according to the Bureau of Census. Leaving US ports in September were 4,174,383 gallons of benzene valued at $1,460,989, as compared with 6,272,459 gallons in August.

On the other hand, total benzene exports for the first nine months of this year were almost double the volume reported for the corresponding period of 1960. Between January and September 34,126,648 gallons were shipped out of the country as compared with only 17,238,622 gallons in the nine-month period last year.

In September the major exports were to:

Italy — 1,796,199 gallons valued at $603,763 left Galveston Tariff Commission District; average price 33.6c. per gallon.

Netherlands—762,206 gallons valued at $304,934 left Galveston; average price 40c. per gallon.

UK—761,654 gallons valued at $236,113 left Galveston; average price 31c. per gallon.

Mexico—488,453 gallons valued at $203,343 left Laredo District; average price 41.6c. per gallon.

Brazil—311,466 gallons valued at $95,588 left Galveston; average price 30.7c. per gallon.

Crude Oil Stocks Rise

Domestic and foreign crude petroleum stocks at the close of the week ended Oct. 28 were 542,000 bbls. higher than at the end of the preceding week.

Week ended October 28—251,148,000 bbls.

Preceding week—250,606,000 bbls.

This comprises a decrease of 496,000 bbls. in stocks of domestic crude and an increase of 1,038,000 bbls. in foreign crude.

(Source: Bureau of Mines)

LPG's and LRG's

Light pressed gas and light refinery gas production in the first half of October fell off slightly from production during the last two weeks in September, according to the API. At the same time the figures show a marked increase over the production totals for the corresponding first-half-of-October period in 1960.

The 356,513,000 barrels of LPG's turned out from October 1-15 are compared with 373,511,000 barrels during September 16-30, and 329,823,000 barrels for the corresponding period a year ago. LRG production followed virtually the same pattern: 129,239,000 barrels for October 1-15, 138,585,000 barrels for September 16-30, and 116,760,000 barrels for October 1-15 a year ago.

API statistics show October to be the peak month for inventories of both LPG's and LRG's. Stocks of LPG's on October 15 soared almost to the 1,600,000,000 mark, the highest over the past three years. LRG's followed suit and, on October 15, totaled a whopping 276,913,000 barrels, the largest inventory by far over any recorded since 1958.

Miscellaneous

Motor Fuel Estimate—Motor-fuel consumption is expected to total 64.9 billion gallons for the United States in 1961, a gain of 2.6 percent over 1960, Federal Highway Administrator Rex M. Whitton announces. The 1961 estimate, prepared by the Bureau of Public Roads, U.S. Department of Commerce, is based on information received from state agencies and other sources.

Motor fuel consumed in highway use is expected to total 59.4 billion gallons, including 65.7 billion gallons and 2.7 billion gallons of special fuels such as diesel and butane. Non-highway use of motor fuel is expected to be 5.5 billion gallons.

Based on this estimate of highway use of motor fuel and the recently published estimate of 1961 motor-vehicle registrations, the annual rate of fuel consumption for 1961 is expected to be 781 gallons per vehicle.

Petroleum Briefs

TEXACO CHIEF OPTIMISTIC: Augustus C. Long, chairman of the Board of Texaco Inc., predicts that Free World petroleum demand will rise about 5 percent a year through 1965.

In an address before the Boston Security Analysts Society last week, he forecast that global demand would rise from 18.9 million barrels a day in 1960 to more than 24 million barrels a day in 1965.

The demand forecast in free foreign countries is even more favorable, he continues, pointing out that in the summer of 1961 this demand for the first time exceeded that of the United States.

He cites the following oil demand increases in major foreign nations during the first half of 1961 over the comparable period in 1960: United Kingdom, 7 percent; France, 9 percent; Italy 16 percent; West Germany, 17 percent; and Japan, almost 40 percent.

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ACETYLACETONE—8 dms, Aceto Chemical Co, Liverpool
ACETOPHENETIDIN—200 dms, Coopenhagen
AGAR—40 bls, Meer Corp, Casablanca
20 bls, Meer Corp, Kobe
35 cs, T M Duche & Sons, Leixoes
50 cs, S B Penick & Co, Pusan
ALUMINUM FLUORIDE—350 bgs, Atlantic Raw Materials, Genoa
ALUMINUM FORMATE—50 dms, Amsterdam
ALUMINUM SULFATE—300 bgs, Interstate Universal Inc, Bremen
350 bgs, Liverpool
AMBRETTE SEED—72 bgs, Marcel Calver, Puna
AMINOPYRINE—52 dms, Pharmaceuticals, Genoa
AMMONIUM CARBONATE—65 cs, American British Chemical Supplies, Glasgow
ANILINE DYES—20 dms, Gebhardt Vogel Tanning Co, Antwerp
6 dms, General Dyestuff Co, Rotterdam
67 dms, Geigy Chemical Corp, Bremerhaven
26 dms, Sandoz Inc, Bremerhaven
152 dms, Heemsoth Kerner, Liverpool
20 dms, L & R Organic Products Co, Genoa
69 dms, Bremerhaven
31 dms, Havre
ANIMAL CHARCOAL—1,000 bgs, American Sugar Refining Co, Glasgow
ANNATTO SEED—50 bgs, Foreign Domestic Distributors, Callao
573 bgs, Callao
ANTIMONY—71 cs, Callao
ANTIMONY OXIDE—688 bgs, National Lead Co, Liverpool
500 bgs, Indussa Corp, Antwerp
ANTIMONY REGULUS—1,240 cs, Rijeka
APRICOT KERNELS—300 bgs, Istanbul
ARABIC GUM—250 bgs, National City Bank, Port Sudan
1,002 bgs, Bank of N Y, Port Sudan
966 bgs, Irving Trust Co, Port Sudan
766 bgs, Morgan Guaranty Trust Co, Port Sudan
ASBESTOS FIBER—500 bgs, Mundet Cork Corp, Lourenco Marques
2,000 bgs, Johns Manville Corp, Durban
ASCORBIC ACID—24 dms, Byron Chemical Co, Kobe
BEESWAX—50 bgs, Brush & Weaving Hair Manufacturing Co, Izmir
72 bgs, H H Pike & Co, Tampico
25 bgs, Machado & Co, Puerto Plata
92 bgs, International Commodities Corp, Valparaiso
44 bgs, Baldini & Co, Tampico
28 bgs, Tampico
15 bgs, Cap Haitien
80 bgs, Dar es Salaam
85 bls, Djibouti
54 bgs, Progreso
32 bgs, Puerto Plata
BENZOIN GUM—30 bgs, Max Van Pels, Tuticorin
BERGAMOT OIL—12 cs, George Lueders & Co, Messina
14 cs, Lo Curto & Funk, Messina
12 cs, Messina
BISMUTH SUBNITRATE—3 dms, Panmed Parmaceuticals, Genoa
BLOOD, DRIED—300 bgs, Myers Sales Co, Copenhagen
BOIS DE ROSE OIL—10 dms, Adrian & Co, Belem
3 dms, Hollander Trading Corp, Belem
5 dms, Peter Andrea Corp, Belem
10 dms, Ungerer & Co, Belem
3 dms, Manaus
30 dms, Belem
BONE CHARCOAL—270 bgs, Martin Baer & Co, Lisbon
BRONZE POWDER—86 dms, Hamburg
CALCIUM CARBONATE—1,800 bgs, Whittaker Clark & Daniels, Liverpool
1,300 bgs, Pluess Staufer, Antwerp
1,200 bgs, Antwerp
CALCIUM CARBONATE, PRECIPITATED — 800 bgs, Liverpool
CANDELILLA WAX—313 bgs, Tampico
CARAWAY SEED—100 bgs, J Bieler, Rotterdam
200 bgs, Hoger Corp, Rotterdam
300 bgs, Ideal Trading Co, Rotterdam
200 bgs, Sokol & Co, Rotterdam
CARDAMOMS—20 cs, S B Penick & Co, Mangalore
CARNAUBA WAX—188 bgs, Smith & Nichols, Parnahiba
63 bgs, M Argueso & Co, Parnahiba
63 bgs, Wm Diehl & Co, Parnahiba
25 bgs, Cornelius Wax Refining Corp, Parnahiba
375 bgs, S C Johnson & Son, Parnahiba
55 bgs, M Argueso & Co, Fortaleza
55 bgs, Cornelius Wax Refining Corp, Fortaleza
CASEIN—500 bgs, H A H Behrens, Buenos Aires
1,195 bgs, J R Spellacy, Melbourne
CASHEWNUT SHELL LIQUID—199 tons, Minnesota Mining & Manufacturing Co, Lourenco Marques
CASSIA—993 bls, K H Landes & Co, Tandjong Priok
274 bls, R J Spitz, Tandjong Priok
CASTOR BEANS—1,472 bgs, Baker Castor Oil Co, Guavaquil
2,562 bgs, Baker Castor Oil Co, Bahia de Caraques
CELERY SEED—174 bgs, Daarnhower & Co, Bombay
87 bgs, A G Dunn, Bombay
175 bgs, California Commodities Corp, Bombay
80 bgs, M J Golombeck, Marseille
CHLORAL HYDRATE—20 cks, Marseille
CINNAMON QUILLS—50 bls, Max Van Pels, Galle
100 bls, Delano Corp of America, Galle
CITRONELLA OIL—15 dms, George Uhe Co, Galle
11 dms, Fritzsche Bros, Galle
CLOVE OIL—69 dms, Zanzibar
COCA LEAVES—321 bls, Chase Manhattan Bank, Callao
COCONUT OIL—720 tons, Pacific Vegetable Oil Corp, Manila
530 dms, Marwood Co, Cebu
850 dms, Manila
COPAIBA BALSAM—5 dms, Lautier Fils Inc, Manaus
6 dms, Peter Andrea Corp, Manaus
5 dms, Magnus, Mabee & Reynard, Manaus
11 dms, Manaus
COPAL GUM—60 bgs, Wm H Scheel, Singapore
70 bkts, O G Innes Corp, Singapore
337 bgs, Singapore
CORIANDER SEED—600 bgs, H C Trading Co, Casablanca
250 bgs, M J Golombeck, Casablanca
600 bgs, Casablanca
CORN OIL—222 tons, Durban
CORN STARCH—300 bgs, Amsterdam
CREAM OF TARTAR—400 bgs, T M Duche & Sons, Genoa
CUMIN SEED—1,600 bgs, Khorramshahr
DEGRAS—27 dms, N I Malmstrom, Rotterdam
23 dms, Traders Service Corp, Liverpool
DEXTRIN—400 bgs, Morningstar Paisley Inc, Rotterdam
20 bgs, Rotterdam
DIGITALIS SEED—17 bgs, Bausher & Teman Co, Hamburg
DILL SEED—170 bgs, M J Golombeck, Bombay
DYES, COALTAR—10 dms, L & R Organic Products Co, Genoa
21 dms, General Aniline & Film Corp, Hamburg
7 dms, Lo Curto & Funk, Hamburg
95 dms, Wedeman & Godknecht, Hamburg
27 dms, Orlex Dyes & Chemical Corp, Hamburg
EARTH COLORS—181 dms, Baker Irons & Dockslader, Bremen
EUCALYPTUS OIL—5 dms, Givaudan Corp, Sydney
25 dms, Chase Manhattan Bank, Lisbon
FENNEL SEED—150 bgs, Buenos Aires
FERRIC SULFATE—75 dms, Hudson Shipping Co, Liverpool
FERROUS TARTRATE—2 kgs, Copenhagen
FISHLIVER OIL—3 dms, Chase Manhattan Bank, Yokohama
15 dms, Mitsubishi Corp, Yokohama
3 dms, Arista Oil Products Corp, Yokohama
FISHMEAL—8,675 bgs, Marine & Animal By Products Corp, Arica
9,261 bgs, Marine & Animal By Products Corp, Callao
1,528 bgs, Marine & Animal By Products Corp, Huacho
2,174 bgs, Chimbote
GELATIN—100 bgs, T M Duche & Sons, Antwerp
80 bgs, H Bruckmann & Lorbacher, Copenhagen
4 dms, D H Burdett, Liverpool
146 dms, M Corbett, Marseille
GHATTI GUM—166 bgs, Nehls & O'Connell, Bombay
GINGER—20 bgs, Van Loan & Co, Kingston
23 bgs, K H Landes & Co, Kingston
GINGER PEEL—63 bgs, S B Penick & Co, Kingston
GLUE—200 bgs, Jung Forwarding Co, Liverpool
GRAPHITE—600 bgs, Joseph Dixon Crucible Co, Bremen
GUAIACWOOD OIL—8 dms, George Uhe Co, Rosario
5 dms, Rosario
GUAR GUM—448 bgs, Morningstar Paisley Inc, Liverpool
400 bgs, Wedeman & Godknecht, Genoa
200 bgs, Meer Corp, Genoa
100 bgs, Colony Import & Export Corp, Genoa
2,374 bgs, Stein Hall & Co, Calcutta
GYPSUM—800 bgs, Whittaker Clark & Daniels, Liverpool
GYPSUM, CRUDE—10,503 tons, U S Gypsum Co, Hantsport
10,371 tons, U S Gypsum Co, Little Narrows
HENNA LEAVES—30 bls, S B Penick & Co, Karachi
HOOF & HORNMEAL—684 bgs, A M Goldstein, Santos
HYDROXYCITRONELLAL—19 dms, George Uhe Co, Marseille
IRON POWDER—29 dms, United Mineral & Chemical Corp, Marseille
KARAYA GUM—60 bgs, Meer Corp, Bombay
733 bgs, Jacques Wolf, Bombay
36 bgs, T M Duche & Sons, Bombay
85 bgs, Morningstar Paisley Inc, Bombay
248 bgs, Stein Hall & Co, Bombay
KOLA NUTS—200 bgs, D Steengrafe & Co, Kingston
LABDANUM GUM—35 bbls, Barcelona
LACTIC ACID—90 dms, Fallek Products Co, London
LAUREL LEAVES—88 bls, Ideal Trading Co, Izmir
85 bls, H Marmorek & Son, Izmir
40 bls, Lisbon
LAUREL WAX—61 bgs, Buenaventura
LAUROYL PEROXIDE—15 dms, Dr F Jonas, Genoa
LAVANDIN OIL—2 dms, Charabot & Co, Marseille
5 dms, Coutin Associates, Marseille
5 dms, Marseille
LAVENDER OIL, SPIKE—11 dms, L A Champon & Co, Barcelona
LEAD OXIDE—60 dms, J J Gavin, Vera Cruz
43 bgs, Vera Cruz
LEMON OIL—5 dms, Fritzsche Bros, Vera Cruz
4 dms, Dodge & Olcott, Tampico
LOCUST BEANS—160 bgs, Prentiss Drug & Chemical Co, Limassol
LOCUST BEAN GUM—75 bgs, Nehls & Connel, Genoa
200 bgs, T M Duche & Sons, Genoa
LOGWOOD EXTRACT—94 dms, American Dyewood Co, Kingston
MACE—112 cs, Catz American Co, Singapore
28 cs, Hismoco American Co, Singapore
73 cs, P H Petry, Hamburg
20 cs, Singapore
MANGROVE EXTRACT — 700 bgs, Saxe Cutch Corp, Singapore
MARJORAM—387 bgs, M J Golombeck, Vera Cruz
MELAMINE—440 bgs, Yokohama
MENTHOL—75 cs, Consumers Import Co, Santos
12 cs, Balfour Guthrie, Keelung
25 dms, Marseille
MERCURY—100 Flks, Leghorn Trading Co, Leghorn
50 Flks, Vera Cruz
METHYLENE CHLORIDE—50 dms, Leghorn
METHYLNAPHTHALENE—25 dms, Biddle Sawyer Corp, Rotterdam
MONOSODIUM GLUTAMATE—150 dms, Ajinomoto Co, Yokohama
MUSTARD SEED—300 bgs, R T French, Copenhagen
1,000 bgs, Berns & Koppstein, Copenhagen
500 bgs, M J Golombeck, Copenhagen
300 bgs, Louis Furth, Copenhagen
851 bgs, F Henjes Jr, Havre
500 bgs, Old Dutch Mustard Co, Copenhagen
338 bgs, London
MYRABOLAM EXTRACT—200 bgs, Tanimex Corp, Liverpool
NAPHTHALENE—1,014 bgs, Gallard Schlesinger, Antwerp
1,150 bgs, Antwerp
NIGER SEED—100 bgs, W L Willner, Massawa
117 bgs, Massawa
NUTMEG—175 bgs, Ungerer & Co, Tandjong Priok
600 bgs, Dodge & Olcott, Tandjong Priok
280 bgs, Kellys America Ltd, Singapore
100 bgs, K H Landes & Co, Port of Spain
100 bgs, M J Golombeck, Port of Spain
112 bgs National City Bank, Galle
547 bgs, Singapore
OLEYL ALCOHOL—15 dms, Olympic Shipping Co, Liverpool
OLIBANUM GUM—60 bgs, Max vanPels, Massawa
67 bgs, Massawa
24 bgs, Aden
OLIVE OIL—75 dms, A Corrao, Barcelona
25 dms Magnus Mabee & Reynard, Barcelona
100 dms J. Victori, Barcelona
50 dms Lionelli Packing Co, Barcelona
711 dms, Malaga
25 dms, Marseille
OREGANO—400 bgs, Louis Furth, Piraeus
950 bgs, M J Golombeck, Piraeus
400 bgs, Hershey Co., Piraeus
221 bgs, H Marmorek & Son, Tampico
QURICURY WAX—106 bgs, Wm H Muller, Rotterdam
PALM OIL—218 tons, Belawan Deli
PAPRIKA—450 bgs, A A Sayia, Alicante
100 bgs, Casablanca
PARAFFIN WAX—100 bgs, Cornelius Wax Refining Corp, Hamburg
PATCHOULI OIL—5 dms, Perry Bros, Penang
16 dms, A Verley & Co, Penang
PECTIN—90 dms, T M Duche & Sons, Gothenburg
68 dms, Colyer Co, Genoa
PEPPER, BLACK—40 bgs, Curacas Trading Co, Singapore
776 bgs, Ludwig Mueller, Tandjong Priok
300 bgs, Otto Gerdau, Belem
200 bgs, C M van Sillevoldt, Belem
210 bgs, Singapore
PEPPER RED—124 bgs, East India Trading Co, Mombasa
500 bgs, Mitsubishi Corp, Kobe
224 bgs, Kobe
161 bgs, Mombasa
PEPPER, WHITE—410 bgs, A G Dunn, Singapore
200 bgs, M J Golombeck, Belem
49 bgs, C Czarinkow, Singapore
250 bgs, Singapore
PETITGRAIN OIL—10 dms, Rosario
PETROLEUM, CRUDE—216,039 bbls, California Oil Co, Sidon
110,278 bbls, Ashland Oil & Refining Co, La Salina
PHOSPHORUS, RED—55 cs, Bremen
PIMENTO—176 bgs, Kellys America Ltd, Kingston
160 bgs, M J Golombeck, Kingston
PIMENTO LEAF OIL—2 dms, Felton Chemical Co, Kingston
2 dms, Magnus Mabee & Reynard, Kingston
2 dms, Baltimore Spice Co, Kingston
POLLACKLIVER OIL—100 dms, Peder Devold Oil Co, Yokohama
50 dms, J H Faunce, Yokohama
50 dms, Mitsubishi Corp, Yokohama
2 dms, Arista Oil Products Corp, Yokohama
POLYETHYLENE—16 bgs, H A Gogarty, Southampton
POLYVINYL ALCOHOL—1,300 bgs, Kobe
POPPYSEED—200 bgs, Sokol & Co, Rotterdam
150 bgs, P H Petry, Rotterdam
100 bgs, Istanbul
POTASH, CAUSTIC—180 dms, B T Chemco Inc, Gothenburg
POTASSIUM CHLORATE—1 dm, Ugine Industries, Havre
POTASSIUM CHROME ALUM—100 bgs, Fiber Chemical Corp, Rotterdam
POTASSIUM NITRATE—340 bgs, Dunkirk
POTASSIUM PERCHLORATE—136 dms, Ugine Industries, Havre
PSYLLIUM SEED HUSKS—243 bgs, Pettibone Chicago Import Co, Bombay
PYRETHRUM FLOWERS—125 bls, Mombasa
PYRITES—202 cks, American Metal Climax, Leixoes
QUEBRACHO EXTRACT—512 bgs, Barkey Importing Co, Buenos Aires
QUINCE SEED—32 bgs, Khorramshahr
QUINIDINE SULFATE—24 dms, Lo Curto & Funk, Hamburg
QUININE ETHYL CARBONATE—10 dms, Leading Forwarders, Rotterdam
QUININE SULFATE—3 kgs, Samrak Chemical Corp, Southampton
RAPE SEED—264 bgs, Hinton & Co, Rotterdam
550 bgs, Hartz Mountain Products, Rotterdam
SAGE LEAVES—167 bls, M J Golombeck, Leghorn
SAGO FLOUR—337 bgs, Manhattan Adhesives Corp, Singapore
R-SALT—3 dms, Aceto Chemical Co, Liverpool
SEEDLAC—1,750 bgs, United Shellac Corp, Calcutta
150 bgs, Capitol Shellac Corp, Calcutta
250 bgs, Bradshaw Praeger & Co, Calcutta
400 bgs, Wm Zinsser & Co, Calcutta
250 bgs, Capitol Shellac Corp, Bangkok
SESAME SEED—560 bgs, Ideal Trading Co, Santos
SHELLAC—44 bgs, F H Paul & Stein Bros, Bremen
SODA, CAUSTIC—360 dms, B T Chemco Inc, Gothenburg
10 cs, B T Chemco Inc, Gothenburg
SODIUM CYANIDE—200 dms, Chemical Manufacturing Co, Liverpool
150 dms, Ugine Industries, Havre
SODIUM LAURYL SULFATE—185 cks, Liverpool
SODIUM PERBORATE TETRAHYRHATE—498 bgs, Block Drug Co, Hamburg
SODIUM PEROXIDE—80 dms, Chemical Manufacturing Co, Liverpool
SODIUM SILICOFLUORIDE—550 bgs, Copenhagen
SODIUM SULFATE, ANHYDROUS—400 bgs, Lo Curto & Funk, Antwerp
SPEARMINT LEAVES—122 cs, Alexandria
STRYCHNINE—8 cs, Walker Chemicals Ltd, Liverpool
STYRAX—77 cs, Meer Corp, Izmir
SULFATHIAZOLE—70 dms, Panmed Pharmaceuticals, Genoa
20 dms, Stanley Blackman Lab, Genoa
30 kgs, Copenhagen
TALC—25,390 bgs, Charles Mathieu, Genoa
1,400 bgs, C B Chrystal Co, Bordeaux
TAPIOCA FLOUR—4,407 bgs, Tapioca Associates, Kohsichang
7,783 bgs, Steinhall & Co, Kohsichang
600 bgs, P A Houghton, Kohsichang
5,600 bgs, Geismar & Co, Kohsichang
550 bgs, American Key Products, Kohsichang
672 bgs, Manhattan Adhesives Corp, Penang
TARTARIC ACID—1,000 bgs, Leonhardt & Brush, Barcelona
75 dms A Corrao, Barcelona
TERPIN HYDRATE—30 cks, Bordeaux
THEOBROMINE—4 dms, Rotterdam
TOLU BALSAM—9 cs, Barranquilla
TRAGACANTH GUM—8 cs, Nehls & O'Connel, Khorramshahr
98 cs, Am-Iran Corp, Khorramshahr
39 cs, Khorramshahr
TRICHLOROETHYLENE—30 dms, Chemical Manufacturing Co, Liverpool
VANILLA BEANS—10 cs, George Lueders & Co, Cristobal
13 cs, Dammann & Co, Cristobal
15 cs, George Uhe Co, Cristobal
15 cs, Morningstar Paisley Inc, Cristobal
12 cs, A Oppenheimer, Marseille
VEGETABLE OIL—50 cs, Polarome Manufacturing Co, Rotterdam
VETIVER OIL—1 dm, Givaudan Corp, Rotterdam
VETIVERT ROOT—40 bls, Norwalk Mills, Tuticorin
WATTLE BARK—390 bls, Bowring & Co, Durban
WAX, SYNTHETIC—3,529 bgs, Moore & Munger, Durban
YLANG YLANG OIL—2 dms, Djibouti
ZINC CHLORIDE—53 dms, Antwerp
ZIRCON SAND—8,000 bgs, Metal & Thermit Corp, Brisbane

Los Angeles

ASBESTOS FIBER—900 bgs, Johns Manville Corp, Laurenco Marques
300 bgs, Perryman Majonier, Durbau
CALCIUM CARBONATE—1,600 bgs, Pluess Staufer, Antwerp
CALCIUM NITRATE—5,000 bgs, Atkins Kroll & Co, Antwerp
CASEIN—800 bgs, Borden Co, Buenos Aires
CELERY SEED—49 bgs, Hismoco American Co, Hong Kong
CLOVE—50 bgs, Lourenco Marques
COPPERAS—500 bgs, J G Wiley, Kobe
COPRA—1,000 bgs, Cargill Inc, Tacloban
2,250 tons, Cargill Inc, Cebu
500 tons, Wells Fargo Bank, Cebu
1,250 tons, Cargill Inc, Dumaquete
500 tons, Procter & Gamble Co, Shimizu
500 tons, National City Bank, Shimizu
800 bgs, Balfour Guthrie, Cebu
1,000 tons, Pacific Vegetable Oil Corp, Cebu
GUAR GUM—100 bgs, Hathaway Allied Products, Genoa
KELPMEAL—200 bgs, W A Siebert, Bergen
LIVERMEAL—161 bgs, Cap Sales Corp, Buenos Aires
OCHRE—448 bgs, F D Davis Co, Capetown
PEPPER, BLACK—140 bgs, Singapore
POPPYSEED—100 bgs, R J Spitz, Rotterdam
QUEBRACHO EXTRACT—820 bgs, First National Chicago, Belem
1,072 bgs, Barkey Importing Co, Buenos Aires
ROSEMARY LEAVES—113 bls, Lisbon
SESAME SEED—150 bgs, R J Spitz, Corinto
SODIUM SILICOFLUORIDE—155 bgs, J C Wiley, Kobe
SULFAMIC ACID—1,650 bgs, Yokohama
TAPIOCA FLOUR—422 bgs, L E Coppersmith, Bangkok
1,120 bgs, H M Newhall & Co, Bangkok
4,424 bgs, Stein Hall & Co, Bangkok
3,343 bgs, Stein Hall & Co, Kohsichang
4,032 bgs, Morningstar Paisley Inc, Kohsichang
532 bgs, Stein Hall & Co, Kohsichang
TUNG OIL—309 tons, Buenos Aires
ZINC YELLOW—400 bgs, Revelli Chemical Co, Antwerp
ZIRCON SAND—1,998 bgs Sydney

Philadelphia

ANTIMONY—138 cs, American Metal Corp, Callao
ANTIMONY OXIDE—891 bgs, National Lead Co, Glasgow
ASBESTOS FIBER—600 bgs, Davies Turner & Co, Capetown
1,800 bgs, Davies Turner & Co, Durban
1,000 bgs, Davies Turner & Co, Lourenco Marques
4,320 bgs, Lourenco Marques
500 bgs, Chaskurz & Co, Lourenco Marques
BONE—2,257 bgs, Ralli Bros, Calcutta
2,150 bgs, C G Trading Co, Calcutta
2,334 bgs, Velleman Corp, Buenos Aires
CASEIN—400 bgs, J R Spellacy, Brisbane
1,190 bgs, J R Spellacy, Melbourne
1,000 bgs, National Casein Co, Buenos Aires
300 bgs, Gdynia
CASTOR OIL—300 tons, Salvador
105 tons, Santos
CHESTNUT EXTRACT—340 bgs, Barkey Importing Co, Naples
700 bgs, Barkey Importing Co, Naples
CRESYLIC ACID—150 dms, Concord Chemical Co, Glasgow
150 dms, Concord Chemical Co, Rotterdam
CRYOLITE, SYNTHETIC—300 bgs, Venice
FUEL OIL—177,396 bbls, Patterson Oil Co, Puerto La Cruz
GRAPHITE—700 bgs, Asbury Graphite Mills, Tamatave
7,210 bgs, Tamatave
GYPSUM, CRUDE—11,292 tons, National Gypsum Co, Halifax
9,329 tons, U S Gypsum Co, Little Narrows
9,093 tons, U S Gypsum Co, Hantsport
MAGNESITE—200 bgs, Smith Chemical & Color Co, Rotterdam
NAPHTHALENE—880 bgs, Antwerp
OLIVE OIL—50 dms, Malaga
35 dms, Seville
PAPRIKA—50 bgs, J Weinstein, Alicante
PETROLEUM, CRUDE—351,325 bbls, Gulf Oil Corp, Mina Al Ahmadi
305,184 bbls, Gulf Oil Corp, Bandar Mashur
305,976 bbls, Gulf Oil Corp, Puerto La Cruz
265,488 bbls, Gulf Oil Corp, La Estacada
262,532 bbls, Gulf Oil Corp, Bachaquero
483,326 bbls, Cities Service Oil Co, Banias
197,678 bbls, Mobil Oil Co, Covenas
206,410 bbls, Mobil Oil Co, Rastanura
151,204 bbls, Texaco Co, Punta de Palmas
96,922 bbls, Texaco Co, Trinidad
128,432 bbls, Atlantic Refining Co, Punta de Palmas
357,315 bbls, Atlantic Refining Co, La Salina
139,750 bbls, California Oil Co, Sidon
QUEBRACHO EXTRACT—1,374 bgs, Buenos Aires
1,123 bgs, First National Chicago, Buenos Aires
1,919 bgs, Barkey Importing Co, Buenos Aires
VANILLA BEANS—67 cs, Camax Co, Vera Cruz
82 cs, Camax Co, Tamatave
23 cs, L A Champon & Co, Tamatave
291 cs, Tamatave
WATTLE EXTRACT—340 bgs, Barkey Importing Co, Dares Salaam
427 bgs, Elkan River Plate Corp, Durban
537 bgs, Elkan River Plate Corp, Durban
ZIRCON SAND—3,001 bgs, Melbourne

San Francisco

ALUMINUM PASTE—30 dms, London
CALCIUM CARBONATE—60 dms, Rotterdam
2,000 bgs, N H Wolfmar, Antwerp
CALCIUM NITRATE—12,500 bgs, Wilson & Geo Meyer & Co, Heroya
CASEIN—500 bgs, International Casein Corp, Havre
280 bgs, Western Dairy Products, Melbourne
CELERY SEED—86 bgs, Kellys America Ltd, Bombay
85 bgs, Hismoco American Co, Hong Kong
COPRA—1,000 tons, Cargill Inc, Cebu
CORIANDER SEED—100 bgs, Hamburg
CUMIN SEED—182 bgs, California Commodities Corp, Hong Kong
DEGRAS—34 dms, Malmstrom Chemical Corp, Hull
DI-ALPHA-ALANINE—33 dms, Millmaster International, Kobe
FENNEL SEED—51 bgs, H M Newhall & Co, Bombay
GYPSUM, CRUDE—1,002 tons, Kaiser Gypsum Co, San Marcos
MUSTARD SEED—600 bgs, Anderson Conrad, Havre
NUTMEG—48 bgs, Hismoco American Co, Singapore
PEPPER, BLACK—70 bgs, H M Newhall & Co, Singapore
1,470 bgs, Singapore
PEPPER, RED—50 bgs, California Commodities Corp, Kobe
100 bgs, Hismoco American Co, Kobe
POLYVINYL ALCOHOL—100 bgs, Kobe
QUEBRACHO EXTRACT—410 bgs, Barkey Importing Co, Buenos Aires
SHELLAC—55 bgs, H W Peabody & Co, Calcutta
SODIUM BICARBONATE—200 bgs, Chemical Manufacturing Co, Liverpool
TAPIOCA FLOUR—1,000 bgs, H M Newhall & Co, Kohsichang
THYME LEAVES—60 bgs, H M Newhall & Co, Marseille
TURMERIC—56 bgs, Kellys America Ltd, Bombay
UREA—7,500 bgs, Wilson & Geo Meyer & Co, Heroya
297 bgs, Chemical Manufacturing Co, Hull
ZIRCON SAND—1,000 bgs, Metal & Thermit Corp, Brisbane

Chemicals for the Milling of Metals Are Taking Aim at Increased Outlets

Chemical milling, a relatively new process, is affording chemical makers the chance to increase their sales in the multi-million-dollar metals fabricating industry. While removal of metals by chemical action is not spanking new — North American Aviation patented the first process in 1954—the use of chemical milling has become of increasing interest during the past three years. Behind the increased interest are new coatings and masking tapes which are resistant to different types of solutions, plus the development of compounded etching solutions which give uniform etching rates without destroying physical or chemical properties of a metal. Also considered of major importance are improvements that have been made in electronic and control equipment.

Aluminum alloys, steel, stainless steel, titanium, magnesium and mag-thorium are all on the roster of materials that have been successfully milled with chemicals. Next to come under study are cobalt nickel alloys, which are already reported yielding to research effort.

It's further anticipated in the chemical trade that fabricators may find it more economical to mill newer alloys, as they are introduced, by chemical means than by machine milling.

Process Started With Plane Makers

The process is a comparatively recent development of the airplane and missile manufacturing industry, directed to fabricating parts with maximum strength and minimum weight.

Developed by North American Aviation, the process is covered by US Patent 2,739,047. Turco Products, Inc., Los Angeles, is the prime licensee and has sublicensed many other companies to utilize this process on a commercial scale.

The process may be used simply to remove weight, but more importantly it may be used to fabricate complicated metal parts by selective etching.

A masking material is applied to the areas that are to remain unetched. Depth of cut is controlled by time of immersion in the etching bath.

It allows deep cuts without distortion of the metal, often a problem in mechanical milling. Some parts are milled by both methods; parts first being cut mechanically to maximum depth without distorting the part, followed by chemical milling to further reduce weight.

In addition to being able to produce thinner parts by chemical milling, it is also possible to make intricate design cuts more easily.

Design changes may move into actual production more quickly using the process because there is no retooling required when a major design change is made.

Most chemical milling has been done on aluminum alloys although, as previously noted, the method has been used commercially on a number of other metals and its adaptability to others is under study.

Proper preparation of the metal surface, before masking and milling, is necessary to obtain good adhesion of the masking agent and, subsequently, to obtain uniform removal of metal in the etching bath.

Neoprene and Vinyls Used

Masking material is generally neoprene or vinyl coating. Currently, neoprene is preferred, and is applied by dipping or spraying.

Three to five coats are used and after the masked part has been cured for an hour at about 200 degrees F., a template, which is cut out at the areas where etching is to occur, is placed on the masked part and the masking material is scribed with a sharp knife, outlining the areas that are to be etched.

The etching solution for aluminum is usually a caustic-based material used at a concentration of 10-15 percent caustic at temperatures as high as 195 degrees F. Acid etchants, primarily hydrochloric, are used to a limited extent.

Chem-Mill & Coatings Division of Turco Products markets strippable masks and coatings, special etchants and polishes and spray etching machines for special application of chemical milling techniques.

Under rights granted by North American Aviation, Turco has licensed virtually all of the major airframe and engine manufacturers in this country and several in Canada, Europe and Asia.

This license includes thirty-one patents, plus many patent applications and processing know-how.

"Chem-Mill" coatings manufactured by the company are also used in many commercial applications where a highly acidic or alkaline resistant, strippable coating is desired. Special adhesives are currently being developed to fill requirements of the aero-space age, Turco reports.

It is also possible to make tapered parts by this process by simply removing the part gradually from the etching solution.

It's expected that more and more magnesium and stainless steel will be chemically milled in the future. While primarily restricted to the aircraft industry, there is little doubt that the process will spread into other industries.

The automotive industry, for example, is expected to find additional use for chemical milling now that more aluminum is being used.

Variety of Metals Can be Milled

General Chemical Division of Allied Chemical Corporation reports chemical milling offers excellent potential for acid producers.

The company points out that not only are acids required for the initial bath make-up, but considerable amounts are needed for replenishing the etching solutions in order to maintain proper concentration.

Aluminum and aluminum alloys make use of caustic soda plus additives and hydrochloric acid in chemical milling. Magnesium and magnesium alloys use sulfuric acid, and steel and its alloys and stainless steel use hydrochloric, nitric, phosphoric, and fluoboric acid.

Titanium has been milled with hydrofluoric and chromic acids plus anhydrous potassium fluoride to precipitate titanium from the bath.

In addition to actual milling, General Chemical reports, standard metal cleaning practices are generally used to prepare the metal. Chemicals used for this purpose are trichloroethylene and perchloroethylene for vapor degreasing, carbon tetrachloride and petroleum solvents for solvent degreasing, trisodium phosphate, sodium carbonate and detergents for emulsion cleaning and sodium metasilicate, tri- and tetrasodium phosphates for alkaline cleaning.

Pickling or bright dipping, both before and after milling, is usually accomplished by various mixtures of acetic acid, bifluorides, chromic acid, hydrochloric and hydrofluoric acids, hydrogen peroxide, nitric and phosphoric acids, sodium dichromate, sodium fluoride, and sodium nitrate.

Chemical Milling a Tool For Armaments Makers

Chemical milling may prove to be a valuable tool for armaments makers. A recent process study made by the Watervliet Arsenal, Watervliet, N. Y., says innovations in methods of eroding metals via chemicals are opening up a field "so new in concept and broad in scope that the designer's ingenuity should be his only limitation in exploiting this methodology."

In testing the method, researchers at the arsenal removed forty-two pounds of 4340 steel from a ninety millimeter M41 breech ring in sixty-one hours by chemical milling. Surface finish was sixty-two microinches. Metal removal rate was 0.0007 inch per minute.

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AIR COMPRESSORS — 2 Chicago Pneumatic 15½x9x10 Duplex, 125 HP sync. motor 650 cfm.

BOILERS—2 Cleaver Brooks 500 HP, 150 PSI Package units, gas/oil w/water demineralizer. New 1957.

CRYSTALLIZER — 316 Stainless steel, Struthers Wells Evaporator, 482 cu. ft. capacity.

FILTERS—Eimco, 6'x8' Rubber lined, repulper.

FILTER PRESSES — 36" plate & frame Sperry, 2 eye, open delivery, all iron.

FILTER PRESSES—36" Sperry with hydraulic closure, wood plates & frames.

ROTARY KILN—30"x40' with gas burner-blower-drive.

SEPARATOR — Gayco 5' mechanical with exhauster and Sly dust collectors.

PYROMETERS—Brown, O, 200° F Recording type.

CENTRIFUGE—Stainless Baker Perkins, Ter-Meer 12" diameter.

FURNACE—American Electric with 30 KVA Transformer Control & Indicating Pyrometers.

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PUMPS—Vacuum, Nash L7 w/30 HP motor, Vee belt drive, Silencer.

AGITATOR—U.S. 30 HP Varidrive, 110/220 RPM, w/Rubber covered turbo.

HEAT EXCHANGERS—Karbate 75 PSI.

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TANKS—50,000 gal. 20x20 vertical Four (4) 10,000 gallon, horizontal.

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RING ROLL CRUSHER — Sturtevant #1 with 25 HP motor, Vee belt drive.

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PULVERIZER—Braun U.A. with 1 HP motor drive, Laboratory size.

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METUCHEN, NEW JERSEY

DISSOLVER—Cowles, 250 gallon, unused, 10 HP x-proof motor.
DISSOLVER—Turbo Mixer Corp., 450 gal.
FILTER PRESSES—18"x18", one eye open, 24"x24" 4 eye, like new; 30"x30", two eye, closed.
STERILIZER — 30"x42"x7' for 100 PSI, quick opening doors each end.
PEBBLE MILLS—42"x36" (90 gal.); 54x42 (245 gal.); 6'x8' (1000 gal.) working capacity with motors.
MIXERS—Lightnin 1 HP, 1150 RPM cone, ¾ cu. ft., 18 cu. ft., and PK 30 cu. ft. (unused).
RIBBON MIXER—22 cu. ft. & 49 cu. ft.
SCREENS—20x37 double Rotex, 28x28 s/gyrocentric, 20x96 double Roball, 40x84, 40x120 Single Rotex.
HAMMERMILLS—2 TH Mikro, 10 HP.
TEFC & Feed Motor—0000 Raymond with feed bins, Cyclone, Stocking Collector.
CONTROLLER — Recording temperature, humidity with Bristol Metameter; Dyna Master.
FEEDERS—Syntron F.O. (3"x18") F22 (8" x 18") F33 (20 x 46), F-45 stainless steel 24" x 72".
PRESSES—Stokes F1, RD3, and R with motor drives.

AT NEW JERSEY ZINC CO.
PALMERTON, PENNSYLVANIA

DRYERS — Proctor & Schwartz Aeroform with 36"x89" Stainless steel feed drum, 8" wide apron, variable speed drive.
VACUUM PUMPS—22"x28" Pennsylvania with 40 HP 1200 RPM motor, Vee drive.
PEBBLE MILLS—#6 Abbe with one piece porcelain linings, 34 gal. oper capacity 1½ HP drive.
FILTERS — 4'6"x8" rotary vacuum, string discharge, Rubber covered, Feinc.
FILTERS—8'x8' rotary vacuum, string discharge, Rubber covered w/Aluminum Housing, Feinc.
FILTERS—Oliver 5 Disc., w/Receivers.
CENTRIFUGES — Bird continuous stainless steel 18"x28" w/10 HP motor, Vee belt drive.
VACUUM RECEIVERS—(8), 7'6" dia. x 9' deep w/cone bottoms & 2 Schutte Koerting vacuum ejectors.
MIXERS (7)—Rubber lined 6'x5' w/3 HP Falk vertical motor/agitators, 1000 gallon.
BUCKET ELEVATORS—8"x5"x84' high, like new with drive.

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Type SC Model 400
ASME code constructed for 250 PSI @ 275° F. New 1955. 1" heads ⅞" shells. 54" ID x 6' 18 lvs with SS screens. Condition like new.
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EQUIPONOMICS

BIRD Continuous Centrifuge 18" x 28" 316 S.S. (1952) 15 H.P. Washing.

COLUMN S.S. 4' D x 65' high, 55 plates.
TANKS S.S. 304, 2500 gal. 7' x 8' new.
KNEADER MASTER—Paterson 2½ gal.
COLLOID MILL—Premier UB5 S.S. 5 H.P.
CENTRIFUGE—ATM Susp. 48" 316 S.S., 50 H.P.
ROLLER MILLS—Ross 14" x 32" Hi Speed Ross 4½" x 10".
CENTRIFUGE—Tolhurst 20", 40" Rubber Lined.
CENTRIFUGE—Western State 36", underdriven, bottom discharge, 316 S.S., 2 speed, 10 H.P. XP.

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15, 75, 100 & 150 GALS.
DOUBLE ARM MIXERS

PFAUDLER 10 GAL. CLOSED JACK GLASS LINED KETTLE

CENTRIFUGALS—12" 30" 40" & 48".
CENTRIFUGES—Sharples #5 & 6 S.S.
DRYERS—Hersey 5' x 26' Rotary Stainless
Stokes vac shelf dryer 22—40"x40" shelves
Buffalo 32" x 90" Double Drum Dryer
Buffalo Vac. Drum Dryer 24" x 20".
Despatch Ovens Elec. Heated.
FILLERS—Powder & Liquid. Also Labelers.
FILTERS—#2 Sweetland Filter.
Niagara S.S. Leaf Filter 45.5 sq. ft.
Oliver Rot. Vac. Filter 3' x 1'.
Hercules Leaf Filter 36" dia.
Ertel 6" & 10" Disc type.
FILTER PRESSES—6" to 36" Iron & Wood.
KETTLES—Stainless Jack. 20 to 500 gals.
Dopp 350 gal. Cast Iron Jack. Vacuum.
Devine Impreg. Units 30" & 36" dia.
Steel Alum & Copper 5 to 2,000 gals.
MILLS—Day HY-R Speed Mill, 20 HP XP.
Raymond #00&0000 Pulverizers
Mikro Pulverizer #4, 2S1, 2TH, 1SH.
Hammer Mills & Pulverizers 3 to 50 HP.
Williams #3 & #2XX Hammer Mills.
Taylor-Stiles 7½ HP Cutter.
Rotary Cutters 1 HP & up.
Sprt-Wald Stainless Spike Crusher.
Pebble, Jar & Ball Mills, Lab to 6' x 8'.
3 Roll, 9" x 24", 12" x 30", 16" x 40".
Lehmann 4 Roll W. C. 12" x 36" Steel.
MIXERS—Baker Perkins 100 gal. Jack.
Baker Perk. 15 gal. horiz. Mixer
Day Imperial 75 & 150 gal. mixers Jack Change Can Mixers 8, 15, 40 gal.
Day Jumbo 700 gal. horiz. Mixer.
Spr. Wald. 10,000 # horiz spiral mixer
Dry Simpson Rotex Sifters 40"x84"
Blystone 3000# horiz. spiral Mixer.
Day 1000# horiz. Dry ribbon Mixer.
Dry Spiral Mixers 50 to 10,000#.
Lancaster 6' dia. 25 HP & #1, 3 HP.
PUMPS—Vacuum 10 to 500 CFM.
Gould 75 HP Centrifugal 250 PSI.
SIFTERS—Day, Robinson Rotex type.
SOAP MACHINERY—Toilet, Laundry, etc.
TABLET MACHINES—Colton 4½ T, etc.
Stokes R single punch & RD1 rotary.
TANKS—Stainless, GL., Lined, Steel.
MISC. Boilers Gas & Oil. Conveyors.

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STAINLESS STEEL EQUIPMENT

COLUMNS
78"x18'—14 trays.
72"x30'—21 trays.
48"x41'—40 trays.
36"x20' Packed.
14"x17'6" Packed.
12"x18'8" Packed.
20"x27'; 16"x21' Gl. Lined.

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HEAT EXCHANGERS
2300 sq. ft. 564— 1"x15' tubes.
1000 sq. ft. 370—¾"x14' tubes.
800 sq. ft. 375—⅝"x14' tubes.
615 sq. ft. 375—⅝"x10' tubes.
420 sq. ft. 268—¾"x 8' tubes.
306 sq. ft. 130—¾"x12' tubes.
225 sq. ft. 96—¾"x12' tubes.
188 sq. ft. 96—⅝"x12' tubes.
146 sq. ft. 91—⅜"x8'6" tubes.
68 sq. ft. 22—¾"x16' tubes.
(8) 77 sq. ft. Fintube.
2", 3", 4" Glass Pipe Coolers.

TANKS
108,000 gal. 18'x61'.
17,500 gal. 15'x16'.
11,500 gal. 12'x15'.
10,500 gal. 10'x23'.
4,500 gal. 6'x25'.
4,000 gal. 8'x12'.
3,500 gal. 8"x 9'.
1,200 gal. 5'x 8' Clad.
750 gal. 5'x 5'.
500 gal. 4'x 5'.
(20) 400 to 50 gal.
2,500 gal. Glass Lined.

REACTORS
Pfaudler ELL 500 & 300 gal., 75 Psi Glass Lined, jacketed, agitated.
Dopp 1700 to 1000 gal. Ni-Resist, jacketed, Type "J" agitator, 150 PSI.
Patterson 500 gal. Steel, jktd., agit., 50 PSI.
Alloy Tank 750 gal. 316 Stainless 42 PSI.
Alloy Tank 300 gal. 316 Stainless 42 PSI.

KILNS & DRYERS
Link Belt 604-24 S.S. Roto Louvre.
Link Belt 7'x45'x½" Rotary Dryer.
4'x40'x⅜" Rotary Dryer, New Shell.
Buflovak 6"x8" Vacuum Double Drum.
Blaw Knox 6'x5'6" Vacuum Single Drum.
F. J. Stokes 38A—16 Tray Dryer.
Link Belt 7'x45'x½" Rotary Kiln.
Allis-Chalmers 8'x60'x⅝" Rotary Kiln.
Vulcan 6'x124'x¾" Rotary Kiln.
Ruggles 10'x100' Rotary Dryers.

CENTRIFUGES—FILTERS
Sharples C27 Stainless Super-D-Hydrator.
Sharples #6 Super Centrifuge S.S. bowl.
Rochester 30" S.S. Susp. Centrifuge.
Bird 4'x12" S.S. Rotary Vac. Filter.
Goslin 36"x24" S.S. Rotary Vac. Filter.
Kelly #50 Pressure Leaf Filter.

MISCELLANEOUS
Swenson 435 sq. ft. S. S. Evaporator.
Baker Perkins DIM 300 gal. Stainless Sigma Blade Mixer.
Stokes RDS2, DDS2 Rotary Presses.
Rotex 60"x84", 30"x96" Sifters, 1 Deck.
Sweco 48" Triple Deck Sifter.
Swenson 24"x20' S.S. Crystallizers, Jktd.
Nash L3 Hytor SS Vac. Pump 140CFM@15".
Nash #4 Hytor Vac. Pump 650CFM@15".
SS Centrif. Pumps 1" to 3"; 10 to 750 GPM.

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LIQUIDATIONS

CLEVELAND, OHIO

1—Raymond #73612 Super High Side 6-Roll Mill, with whizzer, cyclone, piping and motors.
1—Raymond #5047 High Side 4-Roll Mill, with whizzer, cyclone and piping.
1—#1 Raymond Impact Mill, with whizzer, cyclone and piping.

1—Kilby Nickel Single Effect Force Feed Evaporator, 1200 sq. ft.
2—Oliver 5'3"x4' Nickel Clad Rotary Vacuum Filters.
2—Pfaudler 300 and 200 gal. Glass Lined Jkt. Agt. Reactors.
1—Sperry 30" C.I. Filter Press, 27 chambers.
1—Buflovak 32"x90" Double Drum Dryer.
4—Feinc 8'x12' Rotary Vacuum Steel Filters, string discharge.
2—6'6" dia. x 60' Rotary Dryers.
1—5½'x4½'x60' Rotary Dryer.
7—Dorr 80' and 40' thickeners.
2—Fuller Kinyon Pumps H6.
1—Link-Belt 24"x90' Belt Conveyor.
5—Nickel Centrif. Pumps, 2", 3".

BRILL FOR VALUES

CENTRIFUGES

1—Bird 18"x28" Solid Bowl Continuous 304 S.S.
2—Bird 40"x60" Solid Bowl Continuous 316 S.S. UNUSED.
5—Sharples C-20 and C-27 Super-D-Hydrator 316 S.S.
1—DeLaval AC-VO Continuous S.S. 20 HP.
3—Sharples PY14, PN14 Super-D-Canters 316 S.S.
2—Sharples #16, 304 S.S., 3 HP motor.
1—Tolhurst 40" 347 S.S. Imperforate Basket, 15 HP, UNUSED.
1—Bird 40" Suspended Imperforate Basket, 40/10 HP.

TANKS

25—500 to 3500 gal. Vertical 304 S.S. Tanks opened and closed, some agitated.
6—7500, 6000 and 2000 gal. Rubber Lined Tanks.
1—1500 gal. Stainless Pressure Tank, 5'x10', 90#.
1—2000 gal. Horizontal 304 S.S. Tank, 5'x12'.
1—2500 gal. Vertical 304 S.S. Tank, 8'x7'.
1—10,000 gal. Rubber Lined Tank, 10'x17'6".
1—5500 gal. 316 S.S. Clad Pressure Tank 250 PSI.
2—3000 gal. Aluminum Tanks, 7'x11'.
5—25,000 gal. Aluminum Storage Tanks.

REACTORS — EVAPS — CONDS — COLS

4—Glascote 500 glass lined, Jacketed Reactors.
1—Pfaudler 125 gal. 304 S.S. Jkt. Agit. Reactor, 150# int., 125# jacket.
3—Pfaudler 100 & 50 gal. glass lined, Jacketed, Agitated Reactors.
1—8650 sq. ft. NICKEL double effect forced Circulation Evaporator.
1—650 gal. 304 S.S. Reactor with 100 sq. ft. Bayonet Heater.
1—3000 sq. ft. O. G. Kelly, 309 S.S. forced feed Evaporator, UNUSED.
1—550 sq. ft. Buflovak monel single effect Evaporator.
1—300 sq. ft. Swenson 347 S.S. Single Effect Evaporator.
1—250 sq. ft. Buflovak 304 S.S. Single Effect Evaporator.
10—Stainless Heat Exchangers; 910, 536, 370, 250, 131, 70 sq. ft.
5—Pfaudler 26 sq. ft. glass lined Condensers.
1—4'6"x46' 316 S.S. Clad Column, 250 PSI.
8—3'x20', 30"x19' 347 S.S. Packed Columns.
1—24"x35' 304 S.S. Bubble Cap Column.

FILTERS

2—Niagara 370 sq. ft. Vert. 304 S.S.
1—Niagara 110 sq. ft. Vert. 316 S.S.
1—Niagara 92 sq. ft. Vert. Jkt. 316 S.S.
1—#10 Sweetland 36 leaves, 3" centers.
1—#5 Sweetland 304 S.S., 120 sq. ft.
1—Oliver 6' dia. Horizontal 316 S.S.
1—Oliver 4' dia. Monel Horizontal.
1—U.S. 200 sq. ft. 304 S.S. Auto-Jet.
1—Hercules 400 sq. ft. 304 S.S. Pressure.
3—Oliver Precoat 5'x6', 5'x10', 8'x10'.
1—Oliver 5'3"x8' Steel Rotary Vac vaportite housing.
1—Feinc 3'x1' 316 S.S. Rotary Vac.

DRYERS

1—Buflovak Vacuum Shelf, 17—60"x80" shelves.
2—Buflovak 42"x120", atmospheric double drum complete.
1—Buflovak 32"x90" Atmos. Twin Drum.
2—Devine 4'x9' single drum, atmospheric.
1—Buflovak 3'x10' Rotary Vacuum.
6—Louisville Rotary Steam Tube 6'x30', 6'x50'.
2—Louisville 8'x50' Stainless Steel Lined Rotary.
3—Rotary Dryers, 4'x40', 6'x50', 7'x80', 8'x80'.
1—Louisville 4½'x25' Inconel Rotary.
1—Link Belt 6'4"x24' Rota Louvre, 316 S.S.
1—Atmos. Tray, 13 shelves, 3'x3'.
2—10' and 4' dia. 304 S.S. Spray Dryers.
2—Wyssmont, 304 S.S. 6'2" and 9'6" dia.

MIXERS

1—Sturtevant 75 cu. ft. 304 S.S. Rotary Batch Blender, 20 HP.
1—Abbe 110 gal. 304 S.S. Jacketed Agitated Vacum Dispersall Mixer.
2—Baker Perkins 150 and 100 gal. jacketed double arm Sigma Blades.
1—Baker Perkins 50 gal. jacketed.
5—Day "Cincinnatus" double arm, 250 and 100 gal.
1—Steel jacketed Powder Mixer, 225 cu. ft.
1—50 cu. ft. Powder Mixer, 304 S.S.
1—Day 120 cu. ft. Jumbo Powder Mixer, 25 HP motor.
1—45" dia. Lancaster Mixer, 7½ HP.

MISCELLANEOUS

3—Kinney Vacuum Pumps, 1000 cfm, 10 microns, 15 HP.
3—Hardinge 6'x36", 5'x22" and 3'x24" steel lined conical Ball Mills.
1—Sturtevant 6' dia. Air Separator, 10 HP.
1—Komarek Briquetting Press, 3½" face rolls.
2—Mikro Pulverizers, 2TH and 1S1.
3—Swenson Walker Continuous Crystallizers, 24"x30" sections.
2—Tyler Hummer 3'x10' Double Deck Screens.
5—Day Roball Sifters, 40"x120", 40"x84", Double Deck.
6—Nash H10, H8, H6, H5, L5 Vacuum Pumps.
3—Nash H6, L3 347 S.S. Vacuum Pumps.
2—Stokes Rotary Tablet Machines DD2-DD52.

Partial List of Values — Send for Complete Details

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REACTORS

5243—Struthers-Wells Stainless Steel Reactor Jacketed 400 Gal.—Agitated 7½ HP
5284—Patterson Foundry STAINLESS Reactor; 400 Gal. Jacketed 30#; 30# Int. ASME; Agitated
5400 D4—Stainless Jacketed Crystallizing Kettle 3' x 20½" Agitated 7½ HP Motor
5085—HI Pressure Forged Steel Reactor 250 Gal.; 40" x 72", Jacketed 150 PSI; Internal 250 PSI
5440 T104—Ten Lead Lined Sulphonators size from 500 Gal. up
5251 P1-14—Fourteen Stainless Steel 500 Gal. Reactors; 5' x 5'; Bolted Heads; Manholes; Agitators
4819 M10—1000 Gal. Lead Lined Tank: 6' x 5' Lead Coils, Bolted Cover
5020 S16—Stainless Lined 1000 Gal. Reactor 60" x 58"; Jacketed, Agitated with Condensor and Accessories
3934 C41—Steel Reactor; 950 Gal. 5' x 5'6"; agitated; coil heated
5540 T105—6500 Gal. Lead Lined Welded Steel ASME Pressure Vessel with Agitator
4877—Rotating Aluminum Jacketed Vacuum Fermenter 3' x 8' complete with motor
3799 V-1—Lancaster Stainless Lined Rotary Reactor; Jktd.; 50" x 17'4" 300 PSI internal
4626 H1—Mojonnier Stainless Vacuum Pan: 6' x 12'; Vertical Counter Current S.S. Condenser; 261 sq. ft.
4767 W1—Harris Stainless Vacuum Pan 6' Diameter with coils, barometric condenser and accessories
4458 G3—900 Gal. Steel Reactor; 5' x 6' Jacketed; Dished Heads; Anchor type agitator
4343 D2—Nickel Clad Reactor; 7' x 11'6"; manhole top; Jacketed and Agitated
4797 B1-2—Patterson 1000 Gal. Closed Jacketed Steel Mixing Kettle agitated by 20 HP XPL motor
4819 M6-7—Two 1500 Gal. Steel Reactors, Jktd. Agitated; 6' x 5½'
4819 M8—Glass Vert. Tank; 6' x 7'; Dished Heads; Top entering Turbine Agit. 3 HP; S/S coils
4812 D—Sargent & Wilbur Ammonia Disassociator Type A 10,000 cu. ft. per hour . . . hydrogen
5048 D 1-2—Struthers Wells Type 316 Stainless 200 Gal. Vertical Jacketed, Agitated Reactors: 6' x 10'

DRYERS

3853 S7—Flash Drying System in Type 316 Stainless Steel
5398 G2—Despatch Steam Tray Type Oven Model "C" 26" x 70" x 42", Two compartments, 10 Trays each
5200—Sandvik Stainless Steel Belt Dryer; 24 wide
4400 C1—Thomas Double Door Gas Heated Oven 36" x 30" x 21½"
3824 S-5—Freas Electric Ovens complete; 14" x 16" x 16"
5207—Stokes Double Chamber Steam Jacketed Impregnator; 20 Gal.
5193 C1-2—Two Double Chamber Stokes Impregnators; #5648-5748 complete
4812 D11—Pittsburgh Lectro Dryer Model BWC; Size 3500
4955 M43—Pittsburg Lectro Dryer Model BAC; Size 25
5272 P8-9—2 Lectrodryer Dehumidifiers Model BAC Size "0"
5183—Buflovak Vacuum Double Drum Dryer; Chrome Plated Rolls 6" x 7⅝"; accessories
4912—Witteman Double Drum Atmospheric Dryer 22" x 38" with accessories
D9 602—Buflovak Twin Drum Dryer in MONEL; 32" x 72"; 10 HP
D9 103—American Double Drum Dryer; 24" x 60"
3316—Double Drum Dryer; 28" x 60"
4338 A3—Double Drum Dryer 28" x 60" with doctor knives
D9 550—Buflovak Stainless Double Drum Dryer 32" x 120"
4394—Buflovak Double Drum Dryer 42" x 100" complete
5013 H4—Rotary Cooler 3' x 15' with accessories
4767 W2—Single Drum Dryer or Flaker 36" x 45"
4493—Buffalo Bronz Drum Flaker or Dryer; 48" x 40" with 10 HP motor
3303—Type 316 Stainless Drying Drum; 32" x 52"
5397 E6—General American Twin Dryer 42" x 120" with accessories
4877—Alcoa Aluminum Rotary Drum Fermenter 3' x 6'; welded jacketed; manhole (18") each end
5421—Buflovak Rotary Vacuum Dryer in Type 316 Stainless 3' x 7'6" with Jacket. Agitator, Cylone Condenser etc.
4690—Stainless Lined Rotary Counter Current Atmospheric Dryer; 50" x 20' with Oil Burner, Combustion Chamber, etc.
4819 M4—Louisville Stainless Rotary Dryer 30" x 28'
5147 S18—Jacketed Rotary Dryer or Hoaster; 42" x 18'; Monel Shaft and Blades
5260—Louisville MONEL Rotary Steam Tube Dryer; 54" x 35'
D11 E300—Hersey Rotary Gas Heated Dryer 3' x 30'
5353—Link Belt Roto Louvre Dryer 502-20; accessories
3506—Rotary Vacuum Dryer 4' dia. x 7'7½" long

MIXERS

4343 D—7 Baker Perkins Heavy Duty Jacketed Mixers Sigma Double Arms; Size 17; 200 gal. working
5070 F1-2—Stainless Lined Double Sigma Vacuum Mixers; 300 Gal. 56" x 50" x 44"; with 60 HP Motors
4921 T53—Baker Perkins Hexagonal Jacketed Baratte; 150 Gal. good for Vacuum; 36" x 39"
4261—Jacketed Crutcher; 100 Gal. 36" x 24"; bevel gear drive
5475 T1—Lancaster Counter Currebt Batch Mixer; 12" x 5" Pan; 6" Muller
3668-H1—Lancaster Model EAG 3; diameter 45⅝"; 5½ cu. ft.
5512—Patterson-Kelley Twin Shell Blender; 5 cu. ft. Motorized
5471 B1-2—Sturtevant Rotary Blenders Size 7; 7' x 40'; 125 cu. ft. Motorized
M29 A402—Struthers Wells Rotary Blender 6' x 6'
5005—Blaw Knox Conical Blender 9'6" Dia; 10,000 lb.
M29 C800—Sturtevent No. 12 Rotary Batch Blender; 450 Cu. Ft. 40 HP
5360—Day MOGUL Double Arm 150 Gal. Jacketed Mixer good for Vacuum

FILTER PRESSES

4388 D2—Shriver Cast Iron Pl. & Frame Filter Press 24"; 4 eye; closed del. ratchet closing
4755 D1-3—3 Shriver Cast Iron 24" Filter Press; Three Eyed; Closed Delivery; Ratchet Closing
5540 T20—Special Lot of SHRIVER FILTER PRESSES in Cast Iron, Wood, Ni-Resist; 24"-30" 36" (also many Skeletons)
5134—Sperry 30" Pl. & Fr. Ni-Resist 24 Chamber Press
3787 E5—Shriver 30" C.I. 30 Chamber P.&F. O.D.
4343 D13—Sperry Cast Iron 30" Plate & Frame Press
1501 M4—Sperry 30" Type 31 Wood P. & F. Filter Press; 40 chamber; Hydraulic Closing
3989 K1—Independent 32" Wood Pl. & Fr. 68 chambers; 2 eyed; cl. del.
4254—Shriver STEAM JACKETED 36" Filter Press; C.I. 29 chambers; Seco cl.
3834 E6—Sperry 36" Type 41 Filter Press; Hydr. Closure; Cl. Del.
3673 L41—Sperry 36" Aluminum Filter Press 33 chambers; 4 eye with hydraulic closing pump and motor
4352 A1—Shriver C.I. 42" P.&F. Filter Press; 4 eye; closed delivery

MILLS—PULVERIZERS

5525 C4-6—Mikro Pulverizers Model No. 1 SH with 5 HP Motors
4867—Four Stainless Steel Mikro No. 2 Pulverizers; motorized
5540 T14—Five Mikro Pulverizers Model No. 2 S 1
5246—Mikro Pulverizer Model No. 3D 1
3324 E2—Mikro No. 4 F Pulverizers; 15" x 24"
5394—Mikro Pulverizer Model 4 TH with Triple Screw
4300 M1—Mikro Pulverizer Model No. 2 SP
5189 R1—Fitzpatrick Model D Stainless Steel Communiting Mill—7½ HP
5474—Fitzpatrick Model D Stainless Comminutating Machine—10 HP
5327 Z1—Fitzpatrick Homoloid Mill JT; S/S & Monel; 5 HP
4834 M20—Fitzpatrick Model C S/S Divelling Machine; 3 HP motor
4472 G2—Fitzpatrick Comminutator Model K7; Stainless Steel; with 20 HP hi speed motor
4760 C2—Mikro Atomizer No. 5; Stainless Lined; Motorized
4671 S1—Mikro Atomizer No. 6; Stainless Lined wtih Dust Collector
5525 C2-3—Two Mikro No. 4 Atomizers 25 HP XPL Proof Motors
5540 T15—Klus Fine Grind Pulverizers
4264 L1-2—J H. Day No. 3 Distintegrators; 10 HP
5347 P5—Stokes Model 21J Wet Granulator
5378—Colton Stainless Oscillating Granulator 540-15
5409 C3—Colton Stainless Granulator (same as above; no sifter)
3429 A7—Williams Hammer Mill 24" x 15"; requires 60 HP
5113 B2—Jay Bee Model T Hammer Mill; 36 Hammers; 12" x 15½" Feed
3429 A9—Gump Bar Nut No. 40 Hammer Mill 12" 40"; requires 60 HP
3529W—Bauer 24" Double Runner Attrition Mill with two 20 HP motors
3315 E2—Williams Ring Roll Lab. Mill 3 rolls; 10" x 3" with Cyclone and Dust Collector
3120—American Ring Roll Crusher; 30" x 37" throat; 50 HP
5356N—Two Sturtevant 30" STAINLESS STEEL Micronizers with Syntron Vibrators
5440 P4—Szegvari Stainless Lab Jacketed Attritor
3293 N10—Raymond Screen Mill 9" x 18"
5272 P6—Raymond Pulverizer Mill Model #00
4862 K6—Raymond Imp Mill No. 0000; direct drive 10 HP

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Lead Lined Sulphonators • Glass and Lead Lined Reactors • Vacuum Shelf Dryers • Cast Steel, Welded Steel NITRATORS • Shriver & Day Filter Presses • Mikro and Raymond Pulverizers • Steel Ball Mills • Rotary Blenders • Condensers • Receivers • Autoclaves • Blow Cases • Stills • Truck Dryers • Refrigeration Units

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F M C

LIQUIDATIONS— LITTLE ROCK, ARK. ORANGE, TEXAS OMAHA, NEBRASKA

STAINLESS STEEL TANKS

3—20,000 gal. vert. T316LC SS crystallizing tanks, 14'x15' cone bottom, cone top, 3/8".
6—13,300 gal. vert., T321 SS, 11'10"x15'x7".
1—12,000 horiz., T304 SS, 9'6"x20', dished, UNUSED.
3—11,800 gal. vert., T316 SS, 12'x14'.
4—10,000 gal. vert., T316 SS, 12'x12', 3/16", Turbine Agit., Nettco #WT-37 drive, 15 HP.
7—5800 gal. vert., T316 SS, 10'x10', 3/16", Turbine Agit., 10 HP.
2—5700 gal. horiz. T304 SS, 6'4"x24', UNUSED.
2—4500 gal. vert., T304 SS, 8'x12', UNUSED.
18—3650 gal. vert., 10'x7', open top, 3/16".
1—3400 gal. horiz., T304 SS, 6'6"x16', dished.
1—3350 gal. vert., T304 SS, 8'x8'6", dished, 50 psi WP.
1—3300 gal. vert., T304 SS, 6'x14'6", dished.
1—3250 gal. vert., T316LC SS, 6'x15'10".
1—3200 gal. vert., T304 SS, 6'6"x12', dished.
2—3000 gal. vert., T304 SS, 6'x15', dished.
3—3000 gal. horiz., sanitary milk tanks.
7—3000 gal. vert., T316 SS, 8'x8', Agit.
1—2800 gal. horiz., T304 SS, 5'x18', dished.
2—2600 gal. vert., T316 SS, 7'x8', dished, coils.
1—2350 gal. vert., T304SS, 5'x16', 3/16", coils.
1—2250 gal. vert., T316LC SS, 6'x8', flat heads, 3/16".
1—2100 gal. vert., T316 SS, 7'x6'3", dished.
5—2100 gal. vert., T304 SS, 8'x5'6", dished.
1—2100 gal. vert., T316 SS, 6'x9'10".
1—2000 gal. vert., T304 SS, 8'x5', cone.
1—2000 gal. horiz., T304 SS, oval.
1—1650 gal. vert., T304, 5'x11', dished.
2—1600 gal., vert., T316 SS, coils, Agit.
60—1350 gal. horiz. T347 SS, 4'x14' coils, dished, 60 psi.
1—1300 gal. vert., T304 SS, 6'x6', dished.
9—1300 gal. vert., T321 SS, 7'x4'6".
1—1200 gal., vert., T304 SS, 4'x12'6", dished.
2—1100 gal. vert., T347 SS, 4'x11', 60 psi.
100—Stainless tanks, 14 to 1000 gal.

MISC. TANKS

8—28,000 gal. horiz. steel, 11'x38', 75 psi WP.
7—28,000 gal. horiz. lead-lined, 11'x38', dish.
1—12,000 gal. horiz. steel, 8'x30', 250 psi WP.
10—11,500 gal. horiz. Pfaudler blue glass-lined, 8'x30', dished, 20 psi.
2—11,000 gal. horiz. steel, 8'x27', 300 psi WP.
2—9000 gal. horiz. steel, 8'x23', dished.
8—5800 gal. vert. rubber-lined, 10'x10', stainless turbine agit.
1—5500 gal. horiz. Alum., 8'6"x12', dished.
45—5200 gal. horiz. steel, 6'x24', dished.
1—3000 gal. vert. copper, 8'x8', dished.
1—2100 gal. vert. Alum., 6'x10', dished.

DRYERS — KILNS

1—Buflovak 2'x7'10" rotary vacuum dryer, T304 SS, ASME jkt., 3 HP XP Agit.
5—F. J. Stokes #138J-16 Vacuum Shelf Dryers, 195 sq. ft., 16 shelves.
1—Buflovak 98 sq. ft. Vac. Shelf dryer.
2—Buflovak 42"x120" Dbl. drum dryers, ASME 160 psi.
1—American 42"x120" Dbl. drum dryer, stainless.
1—Buflovak 32"x52" Dbl. drum dryer.
1—American 36"x84" Dbl. drum dryer, vacuum.
1—Buflovak 6"x8" Dbl. drum dryer, Vac.
1—Buflovak 5'x12' single drum VACUUM dryer—UNUSED.
1—Vulcan 10'x11'x175' long rotary kiln, 2-tires, 13/16".
3—10'x100' rot. dryers, 5/8" welded.
1—Allis 7'x120' rotary kiln, ⅜" welded.
1—Link-Belt #900-30 Roto-Louvre dryer.
2—Bartlett & Snow 8'x6"x70' rotary dryers, ⅜" welded.
1—6'x150' rotary kiln, 5/8" welded.
1—Link-Belt #604-18 Roto-Louvre dryer.
1—Louisville 5'x30' steam-tube dryer.
2—Louisville 4'x6"x25' steam-tube dryers.
1—Standard Steel 3'x23' rot. dryer.
1—B. & S. 3'x19' dryer, complete.
1—3'x15' Everdur shell dryer.
1—12"x8' Stainless rot. dryer.
3—B. & S. 14"x18'5" rot. stainless calciners.

AUTOCLAVES — KETTLES — REACTORS

1—2000 gal. Glascote blue G/L reactor, jacketed, ASME.
45—1400 gal. Pfaudler blue G/L jacketed kettles, Stainless cover, 3 HP Agit., baffle.
4—1350 gal. T347 SS jkt. kettles, Agit.
14—1250 gal. Pfaudler blue G/L jacketed closed reactors, Agit. vacuum, w/cond.
1—1000 gal. Dopp Cast Iron Kettle, jacket, agit.
1—1000 gal. T316 SS jkt. reactor, ASME, UNUSED.
4—800 gal. Struthers-Wells T316ELC SS clad autoclaves, 3'-6"x10', horiz., ASME 400 psi WP, w/(3) vert. titanium Agit.
1—750 gal. Graver T304 SS jkt. reactor, Agit.
35—600 gal. Pfaudler Stainless Steel jacketed kettles.
2—500 gal. T304 SS jkt. reactors, ASME, Vacuum, UNUSED.
3—500 gal. Pfaudler "R" series, glassed reactors.
6—465 gal. T304L SS reactors, 150 psi int, 165 psi jkt.
1—300 gal. Pfaudler blue G/L reactor, jkt., Agit., ASME.
1—300 gal. T304 SS jacketed reactor, ASME, UNUSED.
65—250 gal. Pfaudler blue G/L kettles, jkt.
2—200 gal. T304 SS jkt. reactors, ASME, UNUSED.
1—200 gal. Readco jkt., T304 SS, Dbl. Motion Agit.
1—175 gal. horiz. Titanium autoclave, 2'x7', 1000 psi, w/(3) vert. Agit.
1—175 gal. T304 SS jkt. reactor, Agit.
2—100 gal. T304 SS jkt. reactors, ASME, 80 psi jkt., vac. int.—UNUSED.
1—3 gal. Auto. Eng. T316 SS, 3000 psi WP, agit., direct-fired, cooling coils.

STAINLESS STEEL PUMPS

4—Aldrich 3⅛"x5" Triplex, T316 SS, w/ceramic plungers, 1000 psi, 30 HP.
4—Aldrich 1½"x2" Triplex, T316 SS, 1000 psi, 7½ HP.
4—Milton-Roy T316 SS proportioning pumps.
1—Worthington 16" Worthite circulating pump.
20—LaBour #15-DPL 2" stainless self-priming pumps.
3—Worthington #3CG-1 Worthite, 3"x2", 7½ HP.
12—Worthite #2-CG-28, 3"x2" centrif., 15 HP.
100—Worthington Worthite, #1½-CNG-74A, etc., 2"x 1½" centrif., w/motors.
6—Oliver Olivite pumps: 2", 1¼", etc.

FILTERS

4—1250 sq. ft. Shriver cast P. & F. filter presses.
5—1000 sq. ft. Valley Alum. P. & F. filter presses.
1—510 sq. ft. Niagara #510-28, T316 SS.
2—350 sq. ft. Niagara #36H-350, T316 SS, vert. leaf, horiz. jacketed tank.
2—300 sq. ft. Proces filters, T304 SS filters.
4—Eimco 8'x8' rotary vacuum, rubber-covered.
2—Oliver 5'3"x3' T316 SS rot. vac., precoat.
1—Eimco 4'x8' rot. vac., T316 SS, precoat.
3—Feinc 3' dia. T316 SS horiz. vacuum filter.
1—Oliver 3'x4' T316 SS rot. vacuum.
50—28 sq. ft. Pfaudler stainles filter tanks.

CENTRIFUGALS

1—Bird 18"x28" contin. cent., T304 SS, conical.
1—Bird 36"x50" contin. cent., T316 SS, conical.
3—Bird 24"x24" contin., Monel, type CH.
6—Sharples Super-D-Hydrators, T316 SS & Monel: #C-20, C-27.
20—Sharples #AS-16V super. cent., Inconel bowls & covers, Vapor-tite, sludge disch.
1—Merco #CX-16, T316 SS contin. cent., 60 HP.
1—Merco #A-24, T316 SS contin. cent., 40 HP.
1—Mercone #C-400, T316 SS contin. cent., 40 HP.
1—Tolhurst 48" susp., T316 SS perf. basket.
3—A.T.&M. 40" susp., T304 SS solid basket.
2—A.T.&M. 40" susp., T304 SS perf. basket.
1—Tolhurst 40" susp. T316 SS perf. basket.
1—Fletcher 32" susp., rubber-covered basket.
1—A.T.&M. 32" susp., T304 SS basket.
1—Fletcher 30" underdriven, T304 SS basket.
1—A.T.&M. 12" susp., T304 SS perf. basket.

COLUMNS—HEAT EXCHANGERS EVAPORATORS—BOILERS

2—Vulcan T316SS 10 plate bubble-cap columns: 110", 60" dia.
1—36" dia. x 6 plate T316SS column.
6—30" dia. x 19' T347SS packed columns.
8—24" x 16' Duriron cast packed columns.
1—24" x 33' Duriron SS packed column.
20—Copper bubble-cap columns: 20" to 54" d.
1—1960 sq. ft. T316 SS exchanger, ASME.
2—1450 sq. ft. T316 SS condensers.
6—1450 sq. ft. Stainless gas heat exchangers.
3—1000 sq. ft. Duriron pipe coolers.
1—900 sq. ft. T304 SS horiz. exchanger.
2—800, 730 sq. ft. T316 SS heat exchangers.
5—691 sq. ft. copper Dbl.-pipe coolers.
8—400 sq. ft. T304 SS pipe coolers.
12—Amer. Heat Reclaiming T316L SS spiral heat exchangers: 162, 73 sq. ft.
3—131 sq. ft. T304 SS horiz. exch., ASME 75 psi.
1—90 sq. ft. Whitlock T316 SS condenser, ASME 1000 psi WP shell & tubes.
15—75 sq. ft. nickel 2" IPS pipe coils.
20—T316 SS condensers & heat exchangers: 510, 427, 410, 400, 390, 290, 277, 264, 250, 50, 47 sq. ft.
20—Duriron pipe coolers, 10 to 170 sq. ft.
7—4000 sq. ft. single-effect calandria evap., copper.
1—1250 sq. ft. Mojonnier Stainless evap.
1—1060 sq. ft. Gen. Amer. T316 ELC forced circulation evaporator, 1953, w/pumps, piping, etc.
3—Buflovak double-effect Stainless Vert. long-tube type evaporators: 840, 710, 588 sq. ft.
1—630 sq. ft. Struthers-Wells T316 SS calandria evap.
1—370 sq. ft. Henzey Stainless evap.
1—250 sq. ft. Buflovak T304 SS evap., forced circulation.
1—118 sq. ft. F. J. Stokes T316 SS still.
5—Comb. Eng. 435 HP boilers, 300 psi.
3—Edgemoor waste-heat boilers, 250 psi.

EVERYTHING MUST BE MOVED IN 30 DAYS— PROVIDENCE, R. I.

3—Pfaudler 500 gal. "R" glassed jacket reactors, agit., w/condensers.
1—Pfaudler 100 gal. "P" jkt. reactor, agit.
2—500, 300 gal. T316 SS jkt. reactors, agit.
2—1600 gal. T316 SS tanks, coils, agit.
6—Pfaudler glassed Thimble condensers: 62, 47, 14 sq. ft.
3—T316 SS condensers: 129, 100, 50 sq. ft.
1—Tolhurst 40" susp. centrif. T316 SS, 20/5 HP.
1—A.T.&M. 36" rubber-lined susp. centrif.
1—Heresite lined 60 sq. ft. vac. shelf dryer.
1—80 gal. T347 SS jkt. autoclave, 350 psi WP.
1—Kenney #KS-47 vac. pump, 2 HP.

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1—Niagara SS horizontal jacketed plate filter, Model 3312D.

2—AT&M 12" SS suspended type centrifuges, complete.
2—AT&M 26" Type 316 SS suspended type centrifuges, complete.
1—Bird SS 40" suspended type centrifuge complete with perforate basket, motor and plow.
3—Western States SS 40" suspended type centrifuge complete with perforate baskets, motor and plows.
1—AT&M SS 48" suspended type centrifuge complete with imperforate basket, motor and plow.
4—Sharples Type 316 SS Nozljectors with 40 HP explosion proof motors.
1—Sharples Type 316 SS centrifuge, Model D-2.
1—Sharples Type 316 SS Super-D-Canter, Model PN-14.
3—Badger Type 316 SS heat exchangers, 450, 500 and 630 sq. ft.
2—Patterson-Kelley SS heat exchangers, 235 and 300 sq. ft.
1—Patterson-Kelley Carpenter 20 SS heat exchanger, 520 sq. ft.
1—Pfaudler Type 316 SS heat exchanger, 75 sq. ft.

2—Shriver rubber covered plate and frame filter presses, 36"x36", 27 chambers.

1—Industrial Process Engineers monel heat exchanger, 85 sq. ft.
1—Vulcan SS bubble cap column, 4' dia. x 25 plates.
17—Stokes type 304 SS jacketed rotary vacuum dryers, 3'x9' and 3'x15'.
1—Stokes steel jacketed rotary vacuum dryer, 3' x 15'.
3—Stokes Type 304 SS jacketed rotating vacuum dryers, 3'x10'.
2—Oliver SS rotary vacuum filters, 3'x2' and 3'x4'.
1—Sparkler SS filter, Model 8-3.
1—Sparkler Hastelloy "B" filter, Model 18D 12.
1—Enzinger SS pressure filter, 330 sq. ft.
1—Shriver cast iron plate and frame filter, press 42"x42", 37 chambers.
1—Sperry heresite lined filter press, 36"x36", 40 chambers.
1—Sperry rubber covered plate and frame filter press, 24"x24", 32 chambers, NEW.
1—Sturtevant #7 dustrite rotary batch blender, NEW.
1—Young SS double ribbon blender,, 4 cu. ft.
10—Robinson SS double ribbon blenders, 250 cu. ft.

2—Day Type 304 SS jacketed double ribbon blenders, 2000 lbs.

3—Robinson SS double ribbon blenders, 125 cu. ft.
1—J. B. Devine SS jacketed double cone vacuum blender, 30 cu. ft.
16—Stainless steel double cone jacketed vacuum blenders, 10 cu. ft.
2—Howe steel jacketed double ribbon blenders.
1—Alloy Fabricators 4000 gal. SS jacketed reactor.
1—Dover 4000 gal. SS jacketed reactor.
1—Stainless steel 2000 gal. jacketed reactor complete with impeller type agitator and drive.
1—Patterson-Kelley 1000 gal. SS jacketed reactor.
3—Whitlock 600 gal. SS jacketed reactors.
1—Pfaudler 300 gal. SS jacketed reactor complete with agitator and drive.
1—Pfaudler 100 gal. SS jacketed reactor.
2—Van Alst 300 gal. jacketed reactors.
1—Walter 300 gal. Hastelloy "B" jacketed kettle.
1—Struthers Wells 300 gal. Hastelloy "B" jacketed reactor.
72—Alloy Fabricators 400 gal. SS jacketed reactors complete with agitators and drives.
3—Stainless steel 12,500 gal. vertical storage tanks.

1—Alloy Fabricators 5000 gal. SS jacketed reactor complete with turbine type agitator and drive.

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2—Stokes Rotary Tablet Machines RDS-3.
2—Day 40 gallon S.S. Pony Mixers.
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1—Aetna Water Still, 20 gph—new.
1—30" Sperry Filter, closed del., 3-eye, 39-plates, 40-frames.
1—International Ball Mill, porcelain lined, 48" x 60", 15 H.P. Unibrake Motor.
1—Sparkler Filter 33-S-28, with Scavenger Plate, steam jacketed, like new.
2—Ball & Jewell #2 Cutters.
1—Patterson Steam Jkt. Ball Mill 42"x36".
2—Twin Screw Mixers, 120 gal. jkt.
Large stock of new and used H.P. Boilers, Tanks, Pumps, Heat Exchangers, Freon Compressors, Steam Jacketed Kettles, Pulverizers & Autoclaves.
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MIXERS—ONLY 5 LEFT—200 gal. working capacity, jacketed, Double arm sigma blades. Motor drive double screw tilt. HURRY AND INSPECT. These outstanding MIXERS will soon be gone.
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1—Porter double cone blender, 30 cu. ft. capacity, complete.
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7—Vertical open top stainless steel tanks, 475 and 350 gallons capacity.
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1250 gal., 6' x 6' full jacketed, dished bottom open-top steel kettle; paddle-type agitator—non-code jacket; with 2" steel coil. Emkay Chemical Co. Elizabeth, N.J. EL 2-7695.

For Sale: Biggs vulcanizer, 8 x 42, Simplex quick opening door, National Board, excellent, $8500. Chase Chemical Corp., 3527 Smallman Street, Pittsburgh 1, Pa.

For Sale: (4)-Stainless Double Effect Evaporators, 608-708-845-1125 sq. ft.; Girdler Votator having three 4" x 46" stainless cylinders; 2' x 6' Stokes stainless Rotary Vacuum Dryer; Best Equipment Co., 1737 W. Howard St., Chicago 26, Illinois.

EQUIPMENT OFFERED

For Sale: 45" x 48" and 2' x 3', jacketed, Steel Ball Mills; Mixing Kettle, jacketed, approximately 900 gallons, motor, agitator, and reducer; Baker-Perkins Sigma Blade Mixer, 100 gallons, stainless steel, motorized. Irving Barcan Company, 249-51 Orient Avenue, Jersey City 5, New Jersey.

EQUIPMENT WANTED

3—Used, Portable lightning type Mixers of 1, 1½ or 2 h.p. size, AC current, stainless steel shafts preferred. Advise condition and price. Union Mining Co., First Nat'l. Bank Bldg. Pittsburgh 22, Pa.

One—Good, used Still capable of producing 100 gals. water per hr. Advise full particulars. Union Metals and Minerals, Inc., 2306 1st Nat'l. Bank Bldg., Pittsburgh 22, Pa.

5—Baker Perkins 100 gal., 2 arm sigma—jacketed roller bearings—hyd. tilt.

1—Mixer-Lancaster—30".

1—Nickel Heat Exchanger—250 sq. ft.

1—Baker Perkins—2½ gal. S.S. jacketed—2 arm naben.

1—Day Imperial—150 gal. screw tilt—double sigma.

MACHINECRAFT CORP.
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MIXER: Banbury #3, 75 h.p. mtr.

MILL: Thropp 18x50", 125 h.p. mtr.

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ECH SPECIALS

Day #40 Imperial Mixer 150 gal. w'k, 40 hp
Abbe 5'x6' Jkt. Ball Mill, chrome mang. steel
Stokes Vac. Shelf Dryer, 2 shelves, 40"x42"
Pfaudler 1500 gal. Glass Tank, closed top
Blaw Knox SS 100 gal. Autocl, agtd. 1000 psi
Buflovak 4"x8" Lab. SS Dbl. Drum Dryer.
Simpson 24" SS Lab. Mix Muller, 1½ H.P.
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Dryer: Porter 2 x 4' vac. drum, st. st.
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Filter: Sweetland #5 st. st. lined.
Filter: Oliver precoat 12x2" type 316 st. st.
Kettles: Stainless steel—Send for list.
Dryer: Procter & Schwartz 6-tray st. st.
Pony Mixers: Day #2, #3 and #4.
Centrifugal: AT&M 60" st. st. perf.

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Fletcher Centrifuge, Suspended 48" dia.
Bird 40" x 60" Solid Bowl Continuous, S/S, UNUSED.
Sweetland Filters #7, #12.
U.S. Auto Jet Self-Cleaning Filter 54".
Buflovak Drum Dryer 5'x12', Chrome Roll.
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—Continued from page 3

pears to be based on the same grounds as the FTC charges, which the examiner has now dismissed."

Commented Dr. Wilbur G. Malcolm, Cyanamid chairman: "We have maintained all along that the government's charges were unfounded. It is gratifying to know that the examiner, after long and careful deliberation, has exonerated the company on all counts."

Dr. Philip I. Bowman, president of Bristol Laboratories, asserted that the government's criminal action appears "all the more unjustified today" in view of the company's "complete vindication" by the FTC examiner.

Upjohn and Squibb statements were equally jubilant, the latter firm adding that its denials of the FTC charges in 1958 have now been "substantiated as absolutely correct."

Pointing out that the record requires more than 11,000 pages of testimony and some 8,000 pages of exhibits, Mr. Piper concedes that it may contain some isolated items of evidence, which standing alone and without explanation, may give rise to suspicion or speculation of conspiracy.

"However, speculation and suspicion cannot replace proof," he declares.

Substantial Evidence Required

"The decision must be based upon reliable, probative and substantial evidence upon consideration of the whole record. By such standards, counsel supporting the complaint have not sustained their burden of proof."

"Based upon a consideration of all of the reliable, probative and substantial evidence in the record, it is concluded and found that the respondents have not engaged in any of the violations alleged in the complaint."

Because the examiner's ruling is not final for the commission, it may turn out to be merely the first step in a long and costly battle between industry and the government.

Mr. Piper's decision is subject to appeal to the full commission, it can be stayed on a motion by commission counsel, or it may be docketed for review.

There was no immediate indication of what if any of these actions might be sought by commission counsel.

The July 28, 1958, complaint against the industry accused:

- Pfizer of securing a patent on tetracycline by misrepresentation.
- Pfizer, Bristol and Cyanamid of withholding material information from the Patent Office.
- Pfizer of issuing and the other companies of accepting licenses when they knew of misrepresentation.
- Pfizer unilaterally and the other companies by conspiracy of attempting to monopolize the entire antibiotics industry.
- All the companies of conspiracy to fix the prices of tetracycline, chlortetracycline and oxytetracycline (known as "broad-spectrum" antibiotics) and of foreclosing competition by licenses and cross-licenses.

In deciding that there has been no law violation in obtaining the tetracycline patent, Mr. Piper reviews events leading up to issuance of the patent to Pfizer in some detail.

Events Leading to the Patent

He explains that during the spring of 1952 a Pfizer team of scientists ascertained the chemical structure of "Aureomycin" (tradename for chlortetracycline, the first broad spectrum antibiotic, discovered and introduced by Cyanamid in 1948) and of "Terramycin" (Pfizer's tradename for oxytetracycline).

Dr. L. H. Conover, a member of this team, speculated that it might be possible to develop a new antibiotic by removing the chlorine atom from "Aureomycin," the examiner continues. He succeeded in doing this by hydrogenation and, as a result, discovered tetracycline on June 17, 1952.

An article by the Pfizer team (the Stephens article) was published in the *Journal* of the American Chemical Society on October 5, 1952, thus revealing to the scientific world the structure of tetracycline and the possibility that this new antibiotic had been discovered.

On October 23 of that year the Conover-Pfizer application for a patent on it was filed with the Patent Office.

"Although 'Aueromycin' had been known for a number of years and extensive research had been conducted with a view to discovering new and better antibiotics, nobody prior to Conover had discovered tetracycline," the examiner states.

"He was the first to recognize and identify tetraycycline as a valuable antibiotic and to devise a method for its production.

"After the public disclosure of the structures of 'Aureomycin,' 'Terramycin,' and tetracycline in the Stephens article, indicating the probability of the actual production of tetracycline, scientists in other pharmaceutical organizations, in the light of this revealed information, began

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to check their experiments, to engage in additional research, and to 'discover' tetracycline."

Cyanamid, Bristol and a non-respondent company (the antibiotic facilities of which were later acquired by Cyanamid) subsequently filed applications for patents on tetracycline and their particular processes for making it. Following complex and extensive proceedings before a patent examiner, Pfizer eventually was issued its tetracycline patent on January 11, 1953.

During the patent proceedings, Pfizer and Cyanamid, because of Cyanamid's blocking patents, entered into an agreement providing that whichever of the two succeeded in getting the patent would license the other, and that Cyanamid, which was then ready to commence selling tetracycline commercially, would furnish a supply of bulk tetracycline to Pfizer to enable it to get into the market.

This agreement, the examiner states, "contained no provisions with regard to resale prices and provided for non-exclusive licenses. There was no agreement or even discussion concerning resale prices or the exclusion of others from the market.

Each Had Power to Exclude

As a matter of fact each party unilaterally possessed the power to exclude other manufacturers of tetracycline.

"Pfizer, if it secured a patent on tetracycline, could prevent anyone else from making tetracycline by the simple expedient of not granting licenses and suing for infringement. Cyanamid, because of the fact that tetracycline could not be produced without infringing * * * [two patents on its 'Aureomycin'], also would have been able to sue for infringement anyone who made tetracycline.

"Without the agreement between Pfizer and Cyanamid neither of them could have made or sold tetracycline and the public would not have had it available."

After receiving the patent, Pfizer issued a license to Cyanamid pursuant to their previous agreement. It also brought infringement suits against Bristol, Squibb and Upjohn but the suits later were settled and the companies were granted licenses by Pfizer. None of these licenses "contained any price-fixing provisions or any other provisions generally referred to as antitrust provisions," the examiner says.

He also holds that "none of the respondents made any misrepresentations to or withheld any material information from the Patent Office" and that contentions by FTC staff counsel that tetracycline was unpatentable "are based upon an erroneous construction of the patent law."

Pfizer Licenses Cyanamid

Turning to the alleged price-fixing and other issues, the examiner says the market for ethical drugs, including antibiotics, historically has consisted of five classes of customers:

(1) Retailers—retail drug pharmacies, (2) wholesalers, (3) non-profit associations (NPA hospitals)—privately-owned hospitals and clinics, (4) city, county and state hospitals (CCS hospitals)—tax-supported hospitals, and (5) federal government agencies.

The examiner reports that the wholesale prices varied among the respondents and that although their prices to retailers were substantially uniform there were legitimate reasons namely:

"Such prices were set unilaterally in order to meet the competition of already entrenched marketers, it was not possible to sell the identical product at a higher price, and it was self-defeating to offer the product at a lower price because this was quickly met by competitors and resulted in a lower dollar return without a proportionate increase in sales because of the inelastic nature of the demand."

Concerning their prices to other classifications, the examiner offers the following findings:

"While the published prices to NPA and CCS hospitals were respectively uniform, larger institutions frequently secured lower prices as a result of dealer bids, free goods and other competitive offers ***. Regardless of the method of classification used, the record establishes substantial price competition in the hospital markets.

"There is no evidence of any agreement or understanding among the respondents with respect to the use of particular directories or the classification of hospitals."

The tabulations of federal bids by the respondents showing considerable uniformity, which FTC counsel rely upon, "omit substantial periods of time, both before and after, when bid variations and price competition discussed above occurred.

"While there were numerous occasions when the respondents, or many of them, submitted identical bids, the bidding and price competition outlined above demonstates that the price was successively driven down from $24.22 less 2 percent in 1954 to $17.24 in 1958, a reduction of nearly $7 on bottles of 100 capsules. The record demonstrates price competition in the federal market."

What About the Market Shifts?

After noting that FTC trial attorneys elected not to offer in evidence cost data furnished by respondents, the examiner says they "now suggest that the respondents' profits are unreasonable and arbitrary, basing their contention upon a comparison of various selling prices with portions or fragments of total costs received in the record.

"As pointed out by the respondents, the failure to introduce available evidence gives rise to an inference that such evidence is adverse to the party having it available.

"The receipt in evidence of certain exhibits which disclosed portions of the cost of production, manufacture, sale and distribution of tetracycline products provides no meaningful basis for comparison between total costs and prices charged by which margins of profit, or spread, can be determined.

"In addition, there are no cases cited which stand for the proposition that there must be a predetermined ratio between costs and selling price under the antitrust laws."

The examiner also states that "if, as alleged, a conspiracy to fix prices, divide the market, and eliminate competition in the sale of tetracycline existed among the five respondents, in all probability there would have been no substantial shifts in market shares held by the respective respondents because of such lack of competition.

"In particular, Bristol, Squibb and Upjohn, because of the substantial lead time and greater public acceptance enjoyed by Cyanamid and Pfizer, could not have hoped to make any sizable inroads into their shares of the retail market with a 'me too' product, and could have expected only to make substantial inroads into the hospital markets, where the factors of public acceptance and lead time were less important, by reducing prices on individual orders and competing for such sales with Cyanamid and Pfizer.

"If a price-fixing conspiracy had existed, Bristol, Squibb and Upjohn would have been unable to do this. However, the record establishes a substantial shift of shares of the tetracycline market from Cyanamid and Pfizer to Bristol, Squibb and Upjohn.

"This fact, coupled with the evidence revealing extensive price competition in the hospital markets, leads logically to an inference that no price-fixing conspiracy existed among the five respondents."

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Abbott Laboratories 60
Allied Chemical Corporation, General Chemical Division 19
Allied Chemical Corporation—Plastics Division 54
Allied Chemical Corporation, Solvay Process Division 40, 43
American Agricultural Chemical Co., The.. 1
American Cyanamid Company, Process Chemicals Department 42
American Lignite Products Co. 58
American Potash & Chemical Corporation... 42
American Smelting and Refining Company 36
American Zinc Sales Company 39
Archer-Daniels-Midland International 63
Argus Chemical Corporation 50
Ashcraft-Wilkinson Co. 49

Baker, H. J., & Bro. 53
Becco Chemical Division, Food Machinery & Chemical Corp. 24, 42, 44
Benzol Products Company 57
Berkshire Chemicals, Inc. 49
Better Finishes & Coatings, Inc. 41
Biddle Sawyer Corp 66
Biochemical Corp. of America 60
Bios Laboratories, Inc. 60
Bower, Henry, Chemical Mfg. Co. 41
Bowman, Charles, & Co. 35
Brill Equipment Company 71
Brode Corporation, The 52

California Chemical Company, Oronite Division 21
Callery Chemical Company 42
Celanese Corporation of America, Chemical Division 76
Chemical Industries Exposition 44
Chemical & Process Machinery Corp. 73
Chemical Service Corp. 74
Chemical Solvents, Inc. 76
Chemsol, Inc. 74
Clintbrook Chemical Company 58
Columbia Southern Chemicals (Refer to Pittsburgh Plate Glass Company, Chemical Division).
Commercial Solvents Corporation 22, 23
Concord Chemical Company 76
Connelly, Inc. 55
Consolidated Astronautics Inc. 44
Coupe, Robert A. 43
Cowles Chemical Company 76

Delhi-Taylor Oil Corp. 12
Distillation Products Industries, Div. of Eastman Kodak Company 51
Dixon Chemical & Research, Inc. 10
Doggett, Stanley, Inc. 63
Duff Chemical Company, Inc. 44
Dunkel, Paul A., & Company, Inc. 63
DuPont de Nemours, E. I., & Co. (Inc.) ... 50, 56
Duval Sulphur & Potash Co 49

Eastman Chemical Products, Inc. 15
Eco Engineering Co. 40
Emery Industries, Inc. 53, 61
Enjay Chemical Company, A Division of Humble Oil & Refining Company 18
Equipment Clearing House, Inc. 74
Erie Casein Dryers 62

Fine Organics, Inc. 76
First Machinery Corp. 71
Florasynth Laboratories, Inc. 64
Food Machinery & Chemical Corporation, Chlor-Alkali Division 6
Foremost Dairies, Inc., Industrial Division. 25
Fritzsche Brothers, Inc. 45, 46, 47, 48, 64
Frontier Chemical Company 51

Gelb, R., & Sons, Inc. 73
Gillespie-Rogers-Pyatt Co., Inc. 61
Gold Leaf Pharmacal Co., Inc. 60
Grace, W. R., & Co., Nitrogen Products Division 62
Greeff, R. W., & Co. 65
Gross, A., & Company 52
Gulf Oil Corporation 17, 66

Harchem Division, Wallace & Tiernan, Inc.. 51
Heat & Power Co., Inc. 70
Hercules Powder, Company, Incorporated. 57
Heyden Chemical Division, Heyden Newport Chemical Corporation 13
Hoffmann-La Roche, Inc 2
Hooker Chemical Corporation 40
Hostawax Company 52
Humble Oil & Refining Company, Penola Division 33
Hutchinson, D. W., & Co., Inc. 64

Industrial Raw Materials Corp. 67
Inland Steel Container Company 57
Interlake Iron Corporation, Coal Chemical Division 56

Jasper Machinery Company, Inc. 73

Kay-Fries Chemicals, Inc. 52
Keunen, Koster, Inc. 52
Knoll Pharmaceutical Company 58

Lawler Company 70
Lebanon Chemical Co. 49
Leonhard, Theodore, Wax Co., Inc. 52
Lever Brothers Company 52
Loeb, H., & Son 73
Loeb Equipment Supply Co. 74
Lucidol Division, Wallace & Tiernan, Incorporated 51
Lueders, George & Co., Incorporated 66
Machinecraft Corp. 73, 74
Machinery & Equipment Company 70, 73, 74
Machinery & Equipment Co., The 73
Magna Manufacturing Co., Inc. 62
Magnus, Mabee & Reynard, Inc. 64
McKesson & Robbins, Inc. 1
Meer Corporation 59
Mercury Chemical Corp 75
Michigan Chemical Corporation 44
Minute Maid Corporation, Citrus Products Division 65
Mississippi Lime Company 43
Mutual Citrus Products Company 65

National Casein 62
New Jersey Zinc Company, The 56

Olin Mathieson Chemical Corporation (Mathieson Chemicals) 37, 38

Pan American Sulphur Company 42
Pearsall Chemical Corp. 44
Penick, S. B., & Company 66
Pennsalt Chemicals Corporation, Industrial Division 1
Pennsylvania Refining Company 67
Perry Equipment Corp. 72
Petro-Tex Chemical Corporation 8
Pfaltz & Bauer, Inc. 66
Pfizer, Chas., & Co., Inc. 20
Philadelphia Quartz Company 40
Philipp Brothers Chemicals, Inc. 76
Pittsburgh Chemical Company 55
Pittsburgh Plate Glass Company, Chemical Division 41
Plastics Division, Allied Chemical Corporation 54
Polyvinyl Chemicals, Inc. 63
Prior Chemical Corporation 1
Process Plants Service, Inc. 70
Procter & Gamble Co. 52
Publicker Industries, Inc. 1
Quaker State Oil Refining Corp. 52
Rambach Chemical Company 74
Raney Catalyst Co. 50
Read, Chas. L., & Co., Inc. 63
Reichhold Chemicals, Inc. 55
Richter, Gedeon Pharmaceutical Products, Inc. 60
Rosenthal's, Joseph, Sons, Inc. 73
Ross, F. H., & Co. 42
St. Joseph Lead Co. 60
Signal Oil and Gas Company, Houston Division 67
Snow, N. J., Equipment Co. 74
Solvents & Chemicals Group, The 27
Sonbert Chemical Co. 60
Stein Equipment Co 70
Sunkist Growers, Inc. 31

Titanium Alloy Mfg. Division, National Lead Company 43
Titanium Pigment Corporation 34
Todd, A. M., Company 65
Turner, Joseph, & Co. 59

Union Standard Equipment Co. 73
United Fuel Gas Company 66
U. S. Borax & Chemical Corporation 1
U. S. Industrial Chemicals Company, Division of National Distillers & Chemical Corporation 29, 30
U. S. Steel Corp. 56
United Ultramarine & Chemical Company, Inc. 62

Verona Aromatics, A Division of Verona-Pharma Chemical Corp. 65
Vitamerican Corporation 60

Western Mica Corporation 62
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Wolf Bill, Inc. 74
Wood Ridge Chemical Corporation 49
Wyandotte Chemicals Corporation 43, 51

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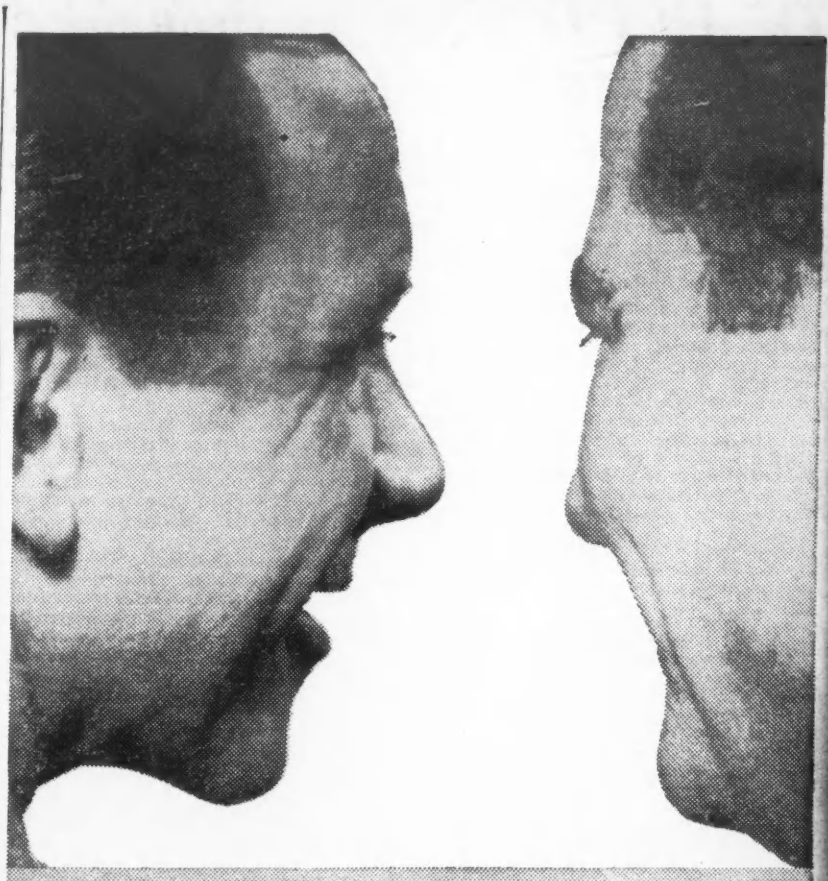

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